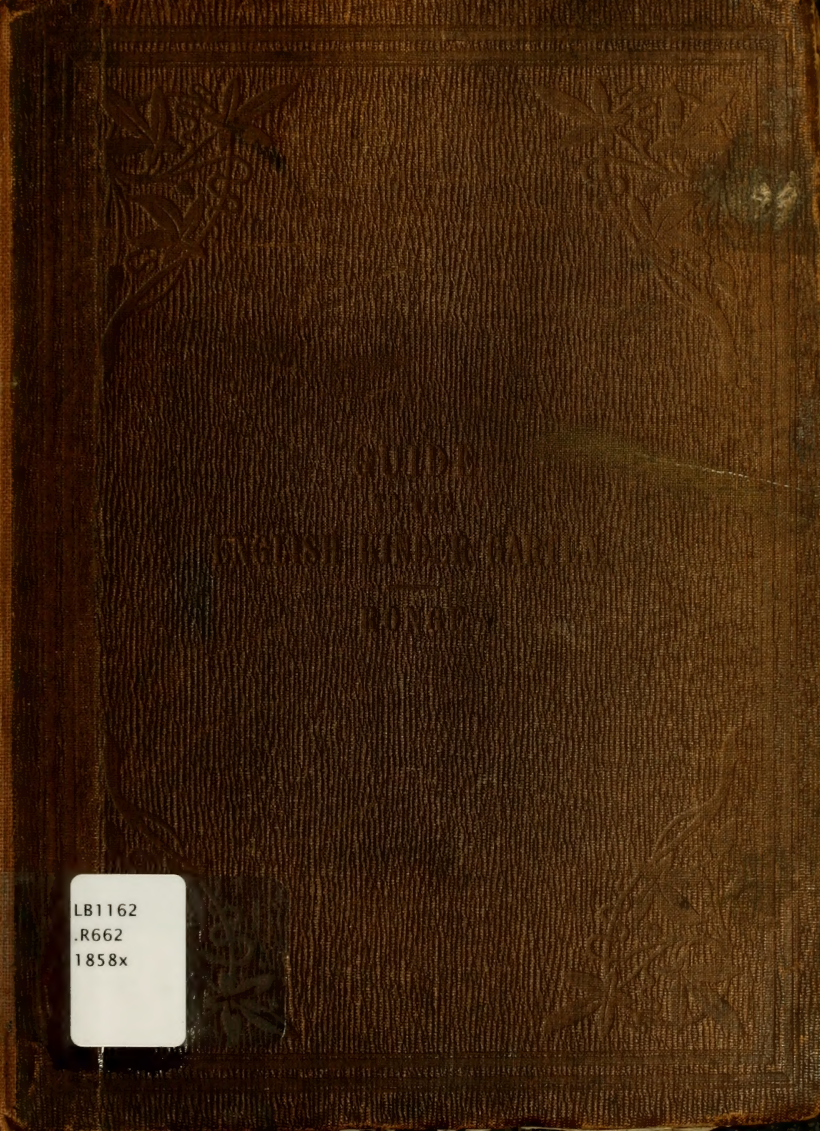

GUIDE
TO THE
ENGLISH KINDER GARTEN

RONGE

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1858x

D. H. Friston Del.

E. Schlegel Lith.

THE PEASANT SOWING.

A

PRACTICAL GUIDE

TO THE

ENGLISH KINDER GARTEN

(CHILDREN'S GARDEN),

FOR THE USE OF

Mothers, Nursery Governesses, and Infant Teachers;

BEING

AN EXPOSITION

OF

FROEBEL'S SYSTEM OF INFANT TRAINING,

ACCOMPANIED BY A GREAT VARIETY OF

INSTRUCTIVE AND AMUSING GAMES, AND INDUSTRIAL AND
GYMNASTIC EXERCISES,

ALSO

NUMEROUS SONGS, SET TO MUSIC AND ARRANGED TO THE EXERCISES.

BY

JOH. & BERTHA RONGE.

SECOND EDITION.

LONDON:
HODSON AND SON, 22, PORTUGAL STREET, LINCOLN'S INN.
1858.

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Lincoln's Inn.

PREFACE.

FROEBEL'S System of Infant Training, to which the following Work is a Practical Guide, is admitted by the most competent judges to be a great improvement upon all former Systems of Infant Education,—superior as they were to the previous practice.

It is evident that much is required in this Work to clearly and ably expound the great and useful principles upon which this System is founded, and but a small portion of the labour is here shewn, that is requisite to reform the nursery and to bring school and home education into harmony. Some guarantee, however, may be afforded to Parents and Teachers in this country, from the fact that the Authors of this Work have long laboured, and with success, in the field of education; and that they do not write from mere theoretical knowledge, but from sound practical experience.

They founded Schools and Children's Gardens in Germany, in the years 1849 and 1850, and introduced the System into this country by forming an Infant Garden at Hampstead, in September, 1851. They have also given a scientific exposition of the System in other English works, in tracts, and in magazines; and having trained English children, in this country, in company with their own, from the year 1851, they have thus had every opportunity afforded for adapting Froebel's System to the character and habits of the English nation.

Knowing that such a Work as the present could only be useful as a demand for it was created in the public mind, the Authors have refrained from publishing it until they had what they deemed sufficient evidence of this result, and which they consider to be now manifest. On the formation of their first Children's Garden, only a few parents took an interest in it; but they still felt confidence in the result: and the Educational Exhibition, which took place in St. Martin's Hall, in 1854, afforded the desired opportunity of bringing the System prominently and advantageously before the public. Several of the requisite playthings had been sent to the Exhibition, and the Council of the Society of Arts had requested Mrs. Ronge to give further explanations of their use. This was complied with; an Address was delivered, and the games of the children were exhibited; after which the Children's Garden was frequently visited by the parents of children and the friends of education.

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Then arose a demand for a book, which would enable parents and guardians to use the playthings in their nurseries and school-rooms at home, as well as in the public seminaries; and to meet this demand the following Work has been written. Persons wishing to become practically acquainted with the System, so as to be qualified for teachers, may receive the necessary instruction on application to the authors.*

Should this Work assist, in any degree, in forwarding the efforts which are now being made in this country, both for Infant and General Education, and shew the necessity for its commencement in the nursery, the authors will consider it their greatest pleasure, and a full reward for the sacrifices they have made in the cause. They have placed their joint names on the title page, because they have worked upon it together *as one;* and they trust that their example, in this respect, may be followed by other parents, especially by those who till now have been indifferent as to the principles according to which their children are being educated. The joint co-operation of father and mother, in this particular, is beautifully expressed by Froebel, in the First Song for Mothers, entitled, *The Mother on looking upon her First Born Child:*

GOD of my life! what thanks to Thee I owe,
Whence all my joys in heavenly currents flow;
Me hast Thou crown'd with dignity divine;
This child, Thy gift, this angel-child is mine.

Dear husband,—father, is not heaven kind
To give this child our hearts and souls to bind?
In his dear angel-form true love we see,—
That heavenly chain which first bound thee to me.

O lovely child, thou hast been born with pain,
But now 'tis past, and all is joy again.
Sleep sweetly on thy tender mother's breast;
In thee we live, in thee we both are blest.

Eternal Father! Source of Life and Love,
Breathe in his soul Thy spirit from above;
Live in the father, husband, mother, wife,
And may we spend on earth a heavenly life.

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* At 32, Tavistock Place, Tavistock Square, London.

PREFACE TO THE SECOND EDITION.

If success were the measure of ability, and popularity a sure standard of worth, we might point with confidence to the almost unprecedented rapidity with which the sale of the First Edition of this Work has taken place. A brief account of the remarkable spread of the System, to which the Work is a Practical Guide, may not be irrelevant, and will form a means of judging of its merits.

There is perhaps no subject upon which *prejudice* and *sectarianism* exert a more withering influence than upon Education. Against these we have entered the lists, and successfully combatted. The most difficult part of the Work of establishing the Kinder Garten System was accomplished, first in Germany in 1851, and afterwards in England in 1854, when only one English family—that of F. Hill, Esq., (the brother of the celebrated Secretary of the Post Office) sent his children into the only Kinder Garten School then existing in England,—that conducted by us at 32, Tavistock Place.

The leading Journals of the day have spoken in such terms of the *Practical Guide* as have led attention to the subject, and materially assisted in making the System known ; among the most influential, we cannot refrain from quoting from the periodical conducted by that great advocate for progress in education—Charles Dickens !

In an article entitled "Infant Gardens," after giving an account of the Kinder Garten System, he proceeds :—

"This book we exhort every body to consult who is desirous of a closer insight into Froebel's System than we have here been able to give. It not only explains what the system is ; but, by help of an unstinted supply of little sketches, enables any one at once to study it at home and bring it into active operation. It suggests conversations, games ; gives many of Forebel's songs, and even furnishes the music (which usually consists of popular tunes—Mary Blane, Rousseau's Dream, &c.), to which they may be sung."

We have not, however, been spared by Theological Journals. The *Evangelical Repository* of Glasgow, in particular, has sneered at our having failed in our labours in Germany. Alas, what Christianity is this?—to tear open the wounds of those, who suffer exile for their convictions and principles—principles of which the Editor of that Theological Paper had, until now, not the slightest apprehension, as he does not seem to know that every advance, whether in science or religion, must be made through persecution—we must "wade through error in our search after truth," and that this trial, like gold passing through the crucible, proves its superiority, and guarantees its worth.

The publicity given to our System, naturally led to an increased number of pupils in our School; and, as the prospect of success opened out upon us, to increased exertions on our part. A training class for Teachers, previously instituted, was now enlarged, and the experince thus acquired, led to further improvements. These improvements were published in a Quarterly Journal, and are embodied in our present Edition, in their proper places. We may particularly mention the invention of a Reading and Spelling Box, which has been found to exceed our most sanguine expectations; also the Modelling Box, intended to facilitate the use of the modelling material.

We have trained about fifty Teachers, Mothers, and Nurses. Our books, papers, and materials for practising the Kinder Garten System, have not only been spread throughout this kingdom, but have been ordered for America, India, and Australia; and thus we see that the System has even found its way into countries where we might least have expected its introduction.

There are now about thirty schools in various towns of England, of which we know; and the want of Teachers and Nurses, who have been trained in our System, is felt—a fact which augurs well; for the first step to improvement is, feeling that it is a want.

So that in spite of many difficulties, single handed, without one to come to the aid of the cause,—with no means but our own and that of a few friends, we have progressed.

But we have had a further aim in view. We have endeavoured to press the System hitherto adopted for young children only, into a wider field of usefulness—by applying its fundamental principles to the Upper Schools. To adapt our theory for this purpose, and test it practically for elder children, has been the chief object of our educational labours for several years; and we have, therefore, endeavoured to render the Second Edition of this Work as complete as in our judgment and experience the subject will admit of.

In bringing the Second Edition before the public—satisfied to have it judged of by that tribunal—we only ask a patient perusal of the Work: not superficially, but searchingly. It has demerits and defects—for no work of man is perfect: but such as they are, they cannot be felt by any more keenly, and no one could more joyfully endeavour to remedy them, when pointed out, than

J. AND B. RONGE.

32, *Tavistock Place, September,* 1858.

INTRODUCTION.

Infant Training has been, until now, less cultivated than School Education; and the civilization of our century, so much praised, has not yet paid that attention to this subject which is needed, if we would fulfil sincerely our duty to our children and the rising generation. The more tender the age of children the more important is their development, because impressions are then more deep and lasting. Mothers have been left without the assistance of science in their nurseries, and have been compelled to accept such playthings as accident and trade have afforded, without any principle and organization. Indeed, look into the nurseries and see how the children are generally treated! "The toy shops have supplied every variety of dolls, animals, houses, &c., but they are finished materials, and the child can only look at them or use them in a given form, in imitation of the ideas of others. However, the child, by the impulse of his nature, wants to create; and, as he finds nothing to represent his own ideas, he destroys the dolls, drums, and boxes, and scatters the remains about the room. He will do so, as long as the parents do not respond to his repeated inquiry,—'*What shall I do?*' by giving him material to create! Indeed, this is the most important question which little children can put to their parents, who should rejoice when these words are first heard, and be anxious to respond to them judiciously. But how frequently the father replies, 'Be quiet; I have no time!' and how frequently is the mother unable or unwilling to comply. The child then looks about for himself and takes, perhaps, an object of great value to play with, or breaks a costly piece of furniture or ornament. We hear then the complaint, 'What a wild and naughty boy!' It is even better that this should be the result than that the child's energy be broken or his creative power extinguished.

"The children of the richer classes are frequently more limited in their occupations than those of peasants and workmen, who find materials by which they can exercise their productive power. This is one great reason why we find comparatively more inventive genius among the lower classes. The biographies of our great men, show that in their youthful days they enjoyed a freedom of action not allowed to the children of the rich in our times.

"Remember how much genius was developed in the plays of the Greeks, and how great was their progress in the fine arts! We pity the oppressed, we sympathyze with the slave, we justly condemn cruelty to animals; but do we look for the source of these evils, to prevent them? Where is the cradle of cowardice, despotism, and falsehood? In the nursery or in the school.

"We hear frequently the inquiry, 'Will not the mother's love find out means to develope the child better than any system?' Maternal love must not be undervalued,—it is stronger than death; but love must be guided by a knowledge of the child's being, and must be combined with respect to the divine laws inherent in his nature. When now we ask the majority of mothers what they have done to direct this power of their children, they reply, 'O, I do not spare money; I have a good kind-hearted nurse.' But, has the nurse been trained to understand the nature of the human being, and the art of developing the child's faculties by directing his actions? This question is not asked by the greater number of mothers. They never would entrust their silk, satin, or linen, to kind-hearted people who did not understand their business, and yet they entrust their most precious objects—their children—to the care of ignorance.

"Love, without the guidance of intelligence, is not sufficient for the education of children. All animals love their young,—the lioness will fight for them till death, and the ape will press them to its bosom till it destroys them.

"The young bride can dress, sing, paint, and speak several languages; but the noble art, how to educate children, has been hid from her; and when she feels the need of it, she is obliged to entrust her children to the care of ignorant nurses. Is her child sick,—she can send for the doctor. Is it unruly, she has no doctor and no medicine; hence she sends it to school, in hopes that others will be able to do that which she cannot do herself."*

The number of those who see this want, and who recognise the importance of a true maternal education, is happily daily increasing. Pestalozzi and other great educators have written books for mothers, and proved that there must be a co-operation of home and school, if education shall become truly successful. But no educator has, until now, succeeded in reforming family education and the nursery more than Frederich Froebel in his Kinder Garten System. We find in it what is wanted by the parents, the young lady, the nurse, and society, for a good Infant Education. The games are so organised that all faculties are harmoniously developed, and that play is not a mere external amusement, but a means of culture and a useful labour for the child. This system differs in principle and practice from the Infant Schools now known in England. The latter contain a great variety of pictures and playthings, which are finished materials, intended to be looked at or to be used in a given form in imitation of others. Thus the young minds of the children are pressed down, hindered in independent activity, and distracted in their attention.

Froebel supplied the children with material, with which, as will be seen from the description of the various Gifts, the children can produce an unlimited number of forms.

The Kinder Garten System is a result of the progress of education and of culture in general, and of a want of the rising generation. Its fundamental principle, being the same which Pestalozzi has carried out so ably, must become the groundwork of education by all nations. In accordance with the laws of nature, it makes a rule, that children should play and move in the garden and open air, in order that their bodily health may be improved, and that they may receive noble impressions from nature. Millions of children are now deprived, in large towns, of the beneficial influence of nature, and it is high time that, in education, the necessary steps were taken to give to children this influence. The Kinder Garten system is a medium between home and school, bringing both into co-operation.

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* From Mrs. Ronge's *Address* in St. Martin's Hall, Sept. 1854.

THE ROOM AND THE TEACHER.

For the proper introduction of the Kinder Garten it is necessary to have two good, spacious, healthy, and well arranged rooms. The first room must be entirely devoted to the Games; and the second, which is to be connected with a Garden, should contain no furniture, and be devoted exclusively to the Exercises. The room used for the Games should be furnished with forms and tables, suited to the age and stature of the children; and every child must have sufficient space for the movement of his arms, so as not to interrupt the others in their labours. To accomplish this, the tables should be marked with lines, dividing them into spaces of about fifteen inches by twelve, the former being the measurement along the side of the table, and the latter the breadth of the margin allotted to the children. A space should be given to each child, and each table should accommodate about six children. For building in union it is necessary that all the tables should be joined together, that proper ideas of order and arrangement may be implanted. Besides this, two cupboards,—one for the toys and implements, and the other for the mats, models, and other results of the children's work,—are necessary. It is of the greatest importance to keep everything in the most perfect order. Each child must have his own number, which is marked on his boxes, slate, needle, modelling knife, slate pencil, drawing book, plaiting mat, &c. The paper slips must also have the same number on them as the mats and boxes, and the child must be impressed with the idea that he is responsible for the care of all his own playthings.

The substance used in modelling is soft clay, which is kept from soiling the table by a piece of oilcloth. The clay is delivered in a round ball, and a wooden knife is given to form it with. The knife, to prevent it from adhering to the clay, is dipped in water.

That the clay may always be soft, it must be kept in wet linen, and sprinkled with water every day.

In the Exercises the children should be arranged according to their number, and the number according to their height. There should be a piano, on which the teacher plays the airs of the Songs. In all Exercises there should be a certain order observed; thus, when the movement to the left is commenced, every child should commence with the left foot; and, when the movement to the right, the right foot should be first brought into exercise. By observing this method, and properly arranging the exercises, the whole body is properly developed.

The teacher must always keep the children cheerful and induce kindness to each other; and in the exercises, good manners and deportment may be taught with success. An open and straightforward demeanour should always be encouraged, and this may be done without any rudeness. Corporeal punishment is excluded from the Kinder Garten.

Sometimes the children may be allowed to select their own Games. Where there is a large garden, it should be properly divided, and every child should have its own allotment, in which it may plant seeds and flowers. This gives the best incentive to voluntary labour, and brings out the result of activity in a regular way.

The time of attendance should be three or four hours in the morning. The Kinder Garten differs from the common school in this, that it is not absolutely necessary that a great many hours should be spent in it every day, for the children will carry the Plays home with them and will continue the same Exercises there. This every parent should encourage them to do.

As the Kinder Garten is not intended for a business speculation, great care should be taken to carry it out thoroughly, without attaching to it the idea of profit generally associated with other schools. Elder daughters, when properly trained, may in this way educate the younger branches of the family. Professional teachers may add it as a new division in their schools.

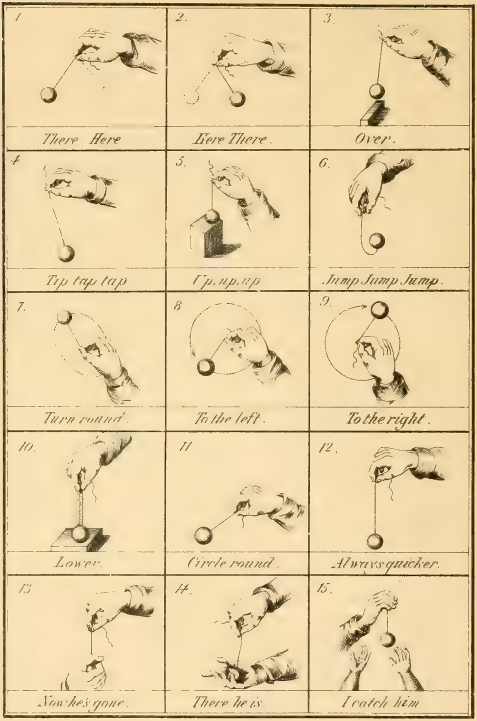
One teacher can never properly attend to more than twenty-five pupils. The best teachers for the Kinder Garten will generally be found to be active and talented young women, who can enter into the spirit of the Games; and, by sympathising with the children, educe their affections whilst they exercise the body and inform the mind.

A cold, dictatorial spirit, will always be fatal to infant training. No one feels so soon as the children themselves, who play with them in heart and soul; and their little hearts always beat in unison with those who love them. We must also insist upon the teacher of the Kinder Garten being well cultivated, our system being entirely unsuited to ignorant and ill-humoured nurses. As the most delicate plants require a skilful gardener, so the tender child requires a degree of gentleness and care which more advanced pupils do not need. Nor should any one attempt to teach this System who has not been properly instructed in some good Training Institution. We mention this for the credit of our system and the welfare of the children, both of which must suffer in incompetent hands. Froebel always taught his teachers in the open country, and sought to inspire them with a love of nature, and to make them natural. Every Ladies' Seminary should make the Children's Garden a branch of their education, that all mothers might thus acquire the power to instruct their own children.

The bond of union between the teacher and parents must ever be considered sacred. The teacher is, in fact, a spiritual mother, who has to take the pure and innocent being, fresh from the hand of God, and to train it that it may return, through a world of conflict, to His paternal arms. Teachers must always be impressed with this elevating idea, and the parents should treat them with the respect due to those who are forming the character and shaping the course of their offspring. The teacher's character must be strengthened by a continual culture of her intellectual and moral powers, that, by kindness, gentleness, and patience, she may be worthy of the high position to which she has devoted her life. The attainment of success in this great work is a matter of difficulty, but the reward is also great, for what can be more noble and interesting than the unfolding of the human soul, and assisting it to bloom into a rich maturity.

FIRST GIFT,

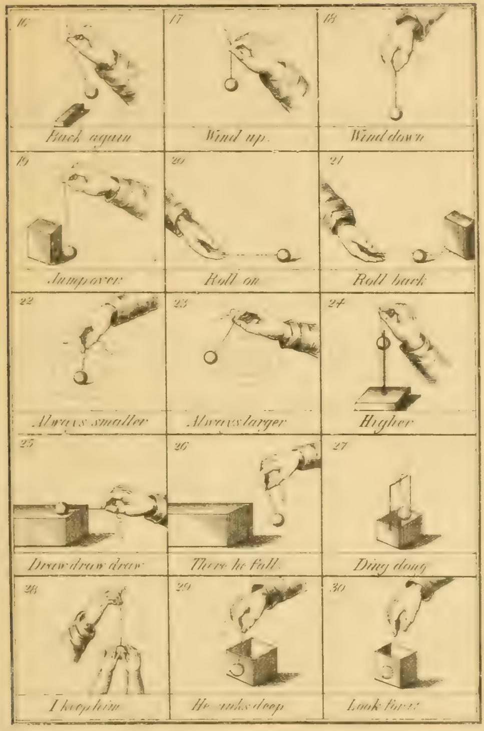
Plate I (a)



1. *There Here*
2. *Here There.*
3. *Over.*
4. *Tip tap tap*
5. *Up, up, up*
6. *Jump Jump Jump.*
7. *Turn round.*
8. *To the left.*
9. *To the right.*
10. *Lower.*
11. *Circle round.*
12. *Always quicker.*
13. *Now he's gone.*
14. *There he is.*
15. *I catch him*

FIRST GIFT,

Plate I(b).



PRACTICAL GUIDE

TO

THE ENGLISH KINDER GARTEN.

FIRST GIFT.

THE SOFT BALL.

(Box containing six Coloured Balls.)

PARENTS and teachers should endeavour to take a comprehensive view of the whole being of the child, and adopt such means as will develope all its faculties harmoniously.

To do this, it is necessary to employ playthings and games capable of being used as means of education.

Two points should be especially considered: the nature of the child and its state of development; and the relation in which the plaything stands to the child, both as it regards quality and quantity.

The child first tries to exercise his limbs and use his senses. At this period, every facility ought to be afforded for the purpose of promoting the free exercise of all his faculties: at the same time he also makes great progress in his inward development.

He labours to observe surrounding objects, and retains the impressions of them. He soon learns to distinguish the eye of his mother, and the cap and mantle in which he is clothed when taken into the open air, from others, though similar in appearance.

In regard to his playthings, he will like such as are best calculated to call forth his slumbering faculties and enlarge the limits of his mind.

For this purpose, the soft ball is the most convenient and the best adapted. In form it is round, like the heavenly bodies; and in appearance it combines the idea of the finite with the infinite.

The young child stretches out his hand to catch it, and presses his fingers to retain it.

The size of the ball is such as a child can easily master, and through it he can exercise many of his faculties.

Its qualities are such as to excite his curiosity:—it has substance, colour, size, form: it produces sound: it is one whole being by itself, and a part when united with others: it rests, it springs, it rolls: it has an invisible centre, and can represent many objects.

By using the ball, the child exercises every muscle of his body, as well as his intellectual and moral faculties. All the energy of the child is required to follow and catch this bounding play-fellow. All his manual strength is requisite to retain it when caught, and to send it forth again.

His eyes are fully employed to watch its movements. His ears, when it cannot be seen, are engaged to catch to its noise for the purpose of detecting its hiding-place.

When the child is old enough to require the association of play-fellows, the ball is the best object to unite them in common play.

Every play, if well directed, may be made to promote the child's future good. In play the first feelings of friendship are awakened, the first attachment formed, and the tenderest sympathies fostered.

In consequence of the adaptability of the ball, to bring forth so many of the faculties of the child, it has been made the first plaything in the Kinder Garten; by its aid a vast number of games are played, accompanied with little songs adapted to the infant mind—to those in the arms of the nurse, as well as those who are old enough for the children's garden.

First, the ball is used alone, as in Plate I.

1 & 2. The ball suspended by a string is swung to and fro, and the child is taught to understand the difference between "here" and "there." As it moves the child repeats,—Here, there.

3. It is held over a cube, or some other object; the child is asked, Where is it now? Over.

4. It is swung first to one side, then back again to the other. *Q.* Where now? *A.* On this side, or that side.

5. The string is shortened and the ball drawn nearer to the hand. *Q.* What do I do? *A.* Wind up.

6. The string is lengthened and the ball lowered. *Q.* What now? *A.* Wind down.

7. The ball is allowed to tap on the table. *Q.* What does it say? *A.* Tip, tap, tap.

8. The ball is drawn up on the top of the cube. As it rises the child says, Up, up, up,—when it reaches the top, Up on the top.

9. The ball is made to spring on the table. *Q.* What does it do now. *A.* Jump, jump, jump.

10. The ball is caused to spring from one side of the cube to the other. *Q.* What does it now? *A.* Jump over.

11. It is drawn along the table. *Q.* What does it now? *A.* Roll, roll, roll.

12. The ball is sent against the cube, and as it rebounds the child is asked, What does it now? *A.* Roll back.

13. The ball is swung round. *Q.* What does it now. *A.* Turn round.

14 & 15. It is swung to the left, then to the right; and the child is taught to observe the difference, and during the movements to say, To the left, to the right.

16 & 17. The ball is swung round, forming as large a curve as possible; as it moves, the string is shortened, which causes the circles to become smaller. The attention of the child is directed to this, and it says, Smaller, smaller, still smaller. The string is now gradually lengthened, the curves become larger, and the child says, Larger, larger, still larger.

18 & 19. The ball is allowed to spring on the table higher and higher each time. As it rises higher, the child says, Higher, higher; afterwards, Lower and lower.

20. It is swung in a circle; the child is caused to observe the form of the curve, and say, Round in a circle.

21. The string is twisted between the finger and thumb, and the ball is caused to turn quickly by degrees. The child observes this and says, Quicker, quicker.

22. The ball is drawn along the table slowly. The child watches it, and expresses the idea, Go, go, go,—or on, on, on,—or draw, draw, draw.

23. It is drawn off the table, and the child says, There it falls.

24. The ball is allowed to move like the clapper of a bell, and the child says, Ding, dong.

25. The ball is suspended from one hand, and caught by the other. The child says, Now its gone.

26. The hand is opened, the ball displayed. The child sees it and says, There it is.

27 & 28. The child lifts its little hands and tries to catch the ball, saying, I catch it; when caught he says, I keep it.

29. The ball is lowered by degrees into the box. He sings, Deeper, deeper, deeper.

30. The string is let go. It is all gone. Now look for it?

Secondly. The ball is used in association with others: there are six in the box,—of the three primary and the three secondary colours. They are used in a variety of ways, which cannot be described, in a book, but can be easily managed with a little practice.

These games are used to impress upon the eye of the child the harmony of colours, which increases its gratification while observing the different movements.

Not less than one hundred games with balls, accompanied with songs and appropriate music, and adapted to a variety of instruction, have been prepared.

We refer to the examples in the Appendix.

SECOND GIFT.

BALL, CUBE, AND ROLLER.

The Second Gift is a progressive advance upon the first in substance and form, although closely linked with it and it; requires a higher development of the child's mind, promoting at the same time the power of observing and distinguishing things.

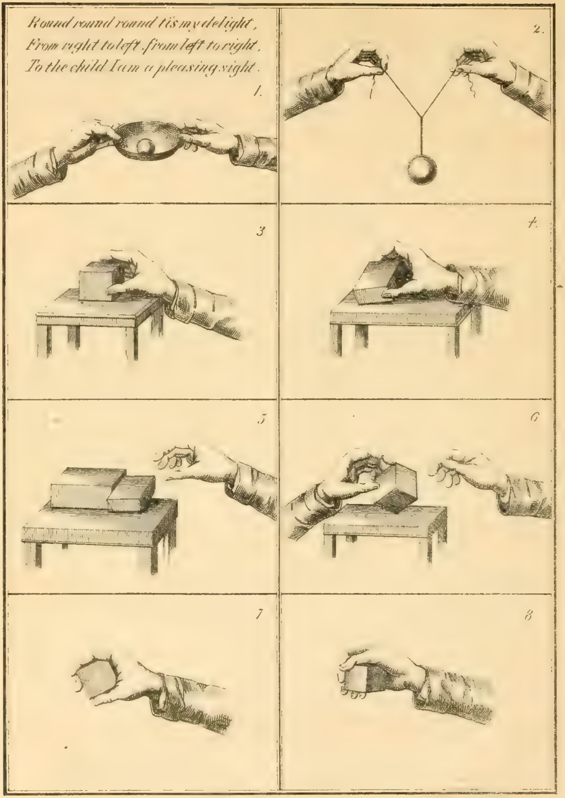
The objects which it contains are the ball, the cylinder, and cube, these being the primary forms of all objects. But the ball is not coloured, and is hard, and as it assumes the shape of the cylinder and cube, the child is induced to observe closely their difference, and form his conceptions. On each of these three objects are edges, in which little strings can be fastened. In moving the cylinder quickly round by a string fastened in the middle edge, the shape of the ball appears to the child, and in moving the cube in the same manner, the form of the cylinder is shewn. Thus the child learns, first, that the ball is contained in the cylinder, and the cylinder in the cube, although there is a difference in the external appearance, and even a contrast between the ball and the cube; secondly, the child will observe that there exists often a difference between the reality and the outward appearance of things, and will be induced to examine objects more minutely. Relying upon this fact, parents and teachers can easily explain to the child similar facts in nature, as for example, that the sun appears to move round the earth, when in reality the latter moves round the sun. From these remarks it will be seen, that even a young child can find delight and instruction in this Gift, when at the same time parents and teachers can make use of it for further observations.

The games of this Gift are so simple, that the weakest child can find delight in them, so instructive that the most scientific mind can derive information from them, and so capable of a surprising variety, that they afford pleasures inexhaustible.

They teach to a child a dumb language, which he can understand, before he can express his thoughts and impressions in words.

When we see a child place in his little mouth things unfit to be eaten, we oft mistake him, by concluding that he desires food. If we look in his face, we shall find that

Plate II (a).



Round round round tis my delight,
From right to left, from left to right,
To the child I am a pleasing sight.

SECOND GIFT. Plate II. (*a.*)

1

Round, round, round, 'tis my delight,
From right to left, from left to right,
To the child I am a pleasing sight.

2

A ball I am wherever I go,
Wherever I turn myself I show.

3

The cube is at rest: it is my will
That it should lie quite still, quite still.

4

It tumbles here, it tumbles there,
It cannot be still on its edge, 'tis clear.

5

It stands on one edge and does not fall:
Why does it so?—Tell me all.

How easily on one point I stand,
When steadied by one little hand.
Look here! and you will quickly learn,
How easily on one point I turn.

7

You see but one corner,—Where are all the others?
Ask your little sisters, ask your little brothers.

8

Two corners now you only can see,
What are the rest doing? Where can they be?

SECOND GIFT. Plate II. (*b.*)

9

Whether I turn from the East or the West,
Three corners I shew, and hide all the rest.

10

To swing, swing, swing, is my employ,
May my swinging give you all joy.

11

By my edge I hang and swing,
I can move, but cannot sing,
Far and near—to and fro,
This way, that way, I can go.

12

I swing by one corner, see, see, see,
How long I appear, pray look at me,

13

With a stick thro' my centre I can turn round,
And look like a roller that rolls on the ground.

14

Put a stick thro' my edge and whirl me round,
And a perfect circle I shall be found.

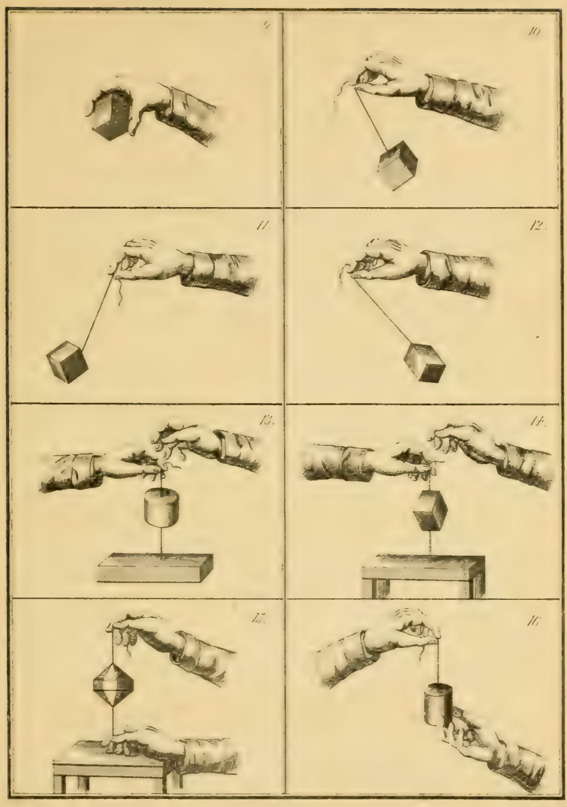
15

Put a stick thro' my corners, and I will shew,
Many pretty forms as round I go.

16

With a string through my centre I rapidly run,
My edges and corners delight in the fun,
To you they are lost, though there they remain,
And when I stand still, you will see them again.

Plate II (b)



in reality he is merely using the only means at his command to express his love for what he admires.

To the child the simple and rough figure is the most intelligible. The infancy of nations is characterized by the same peculiarity. The ancient Egyptians placed three cubes upon each other and called them the three graces; so a child will arrange stones, cubes, &c., and call them sheep, chickens, or whatever else may be at the time his mental ideal.

The following illustrations may aid the teacher in the use of the Second Gift.

In this box will be found a ball, a cylinder, a cube, a stick, and a string; on further examination, it will be found, that the cube and cylinder are perforated so as to allow the stick and string to be fixed to them: when they are thus united a great variety of motions can be produced, many of which cannot be described with the pen; a few, however, may be gathered from Plate II.

During the different motions the words under each plate may be sung.

These forms and motions can be multiplied according to the taste and tact of the teacher: the solids can be made to jump like a cat, creep like a mouse, crawl like a worm, move on the wall like a fly, pass to and fro like a pendulum, go round like a windmill, along the floor like a cart, climb hills, descend into pits, form circles, elipses, &c.

As the child grows older, he will examine the cube minutely and count its six plane faces. He will practically learn that each face is bounded by four straight lines, which form four right angles; that these faces meet each other, and form twelve edges; that the plane angles meet in points, and form eight corners or solid angles.

He will examine the cylinder, and find it bounded by two opposite plane faces and one curved face; he will look at the plane faces and find that each is bounded by only one line, and that line without end; and he will become familiar with the circle—he will see a hole through the centre of the cylinder, and perceive that the curved line is every where equally distant from that hole, and will learn practically that the circumference of a circle is every where equally distant from the centre.

He will examine the sphere, and find it bounded only by one face, without edges, or corners, or angles; he will tie a string round it, and perceive that it forms a circle; he will measure the string, and soon learn that the length of the string is the circumference of the sphere; he will put a stick through the sphere and easily learn how to know its diameter.

As the child grows older he is taught, by the aid of a watch or the minute-hand of a clock, to ascertain the height to which he can throw his ball; if it be thrown perpendicularly it will rise 8 feet and return to the ground the first second, 3 times 8 or 24 feet the second, 5 times 8 or 40 feet the third, and so on according to the odd numbers.

The ball is rolled upon the ground and the child caused to observe how the motion decreases slowly until it ceases altogether, and he is taught to call his motion retarded motion.

The ball is allowed to roll down an inclined plane, and, as the child observes its increased speed, he is taught to call the motion accelerated motion.

A cube is placed on an inclined plane, and the ball placed against it. The child observes that the weight of the ball is not sufficient to move the cube; the ball is now removed to a distance and allowed to roll against the cube with sufficient velocity to move it. The child is taught to call that power which moves the cube, the momentum of the ball.

A string is fastened to the ball, it is swung round; the child is taught to observe the two forces employed. The circular motion is interrupted, and the child perceives that it is still held to the centre. It is again swung and allowed to fly from the centre; the child is induced to observe the differences of the motions, and led to perceive the relation between the centrifugal and the centripetal force.

A semicircle is formed on the floor and divided into degrees, the base being parallel to the wall of the room. The child is taught to roll his ball upon the central line that divides the semicircle into two halves, when, after striking the plane surface of the wall, the ball rebounds in a straight line; the ball is then rolled along the line of 45°, and the child perceives that it does not return along the same line, but along the line of 45° on the contrary side.

The ball is rolled along other lines and a similar result is obtained, and the child is induced to enquire into the laws of reflection, &c.

Thus the groundwork of mechanical science will be laid without infringing upon the enjoyment of the child: he will put a string or a stick through the cube, and turn it round; when he will perceive the cylinder, the wheel, and the double cone. The cylinder will appear as the corners and edges disappear.

He will draw a string through the cylinder and perceive, that when the circular faces of the cylinder disappear, the ball appears, and he will conclude that the cube contains the cylinder, and the cylinder contains the sphere. He will not stop there, his mind will become so formed that he will readily perceive the connection between cause and effect, and ultimately feel that the present was contained in the past, only not seen from the corners and edges which the progress of civilization has worn away. Such a mind in after-life will recognize the same law in every thing, from the creation of a world to the opening of a rose-bud,—from the historical development of nations to that of individuals.

THIRD GIFT.

THE CUBE DIVIDED ONCE IN EVERY DIRECTION.

The great complaint of parents and teachers at the present day is, the want of respect, and true affection in children, towards those who are advanced in age.

At no period has the harmony between the old and the young been so little manifested as in this age of high civilization; in large towns this evil is more evident than in the country; this may be partly accounted for by the change which has taken place in the domestic habits of the people, both among the rich and the poor. The departure from the simplicity of nature, the thirst for fashionable accomplishments, the desire to adorn the outward form, and the aspiration after greatness rather than goodness, have caused society to neglect many of those means by which the inward being can be developed, and without which there can be no true greatness, no intrinsic worth.

The history of true greatness can commonly be traced to the mother's care of her infant.

The child feels true attachment to the breast that gives it nourishment, the bosom on which it reclines, the voice that soothes it sorrows, the eyes that speak to it what no tongue can utter, the arms by which it is embraced; in short, the being by whom it is nursed, whether she be distinguished by the name of mother or nurse. These feelings cannot be transferred to another who occupies a secondary relationship, though in that capacity she may expend immense wealth in adorning its body, decorating its cradle, supplying it with every variety of toys or sweetmeats for its gratification—even though the sacred name of mother be added,—it can have no power to establish between them that union which must spring from within.

The mother is the true natural educator of the child; and, if she transfer that office to another during her child's earliest infancy, she need not be surprised if the perquisities also of that office be transferred, however strongly she may desire to retain them.

This union can never be established by the development of the body alone, nor by the pleasure given to a child by means of the excitement caused by finished objects. A child will always remember with deep interest those who have joined in his childish games, told to him simple stories, held communion with his soul; while he will forget, or treat with indifference, those who may have expended their last shilling to supply him with the means of external gratification. To establish this union we must commence early, while the child feels himself in union with external objects, before he comprehends the idea of separation and distance.

To accomplish this work successfully, an appropriate place is needful, where, free from the excitement of artificial life, secure from danger, and surrounded by beings for whom the child has an affinity, it can exercise its bodily and mental faculties without undue restraint.

If we enter our botanical gardens, and observe with what care they are tended, how every plant is supplied with the means of proper temperature, air, light, soil, and moisture ; how the smallest pebble that might prevent the development of a single seed, is removed; what efforts are made, not to adorn them—but, to call forth their native beauty;—we shall learn a lesson worthy of imitation in our dealings with children; and, if we think of how much greater worth is a human being than a plant, we shall be inclined to ask, What can we do to provide a garden in which humanity may bloom and put forth all the excellence of which it is capable?

The object of the ENGLISH CHILDREN'S GARDEN is to accomplish this; and this Third Gift is designed to aid in securing the desirable union between the mother and the child, between God and the world.

When we observe the actions of a child in the nursery, or when left to himself, we find that he first examines, then takes to pieces that which he has examined, to see what there is within; and lastly, tries to unite again the parts, or repair the injury done.

This box, which contains one cube divided into eight equal parts, will gratify that desire.

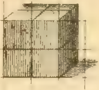
The child is first taught to invert the box, after drawing out a small part of the lid; secondly, to draw out the lid entirely and lift up the box, he then finds the cube complete, and is allowed to pursue the dictates of his mind;—he may divide it into two, four, or eight equal parts, place them upon each other, lay them side by side, count them, or arrange them in a thousand different ways to suit his inclination.

After a time he will examine them more carefully; he will see that each represents the whole, that each has the same form, number of faces, edges, corners, as the whole ; he will learn to distinguish their number, size, form, position, order, and arrangement; he will learn the true meaning of up, down, here, there, this, that, these, those, above, below, under, over, upon, underneath, within, without, large, small, &c.

Every day he will find something new for himself, if we do not attempt to force it upon him. According to his development he will vary his forms, those forms he will find infinite in variety; his feelings will be gratified by the forms of beauty, his power of representation will be exercised by the various forms of life, and his faculties of perception,—his thinking, reasoning faculties, as well as his imagination,—will be cultivated by the forms of recognition : at one time the cubes will become to him a shepherd and his flock, at another a garden with trees and seats according to his fancy, or the ideas most vivid at the time. The office of the teacher, or children's gardener, is to aid the child in the expression of his own ideas, in an indirect manner, by little stories and other means, which a well-trained teacher will ever have at command.

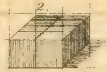
III.

1



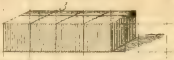
Cube.

2.



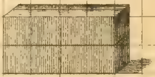
Board.

3



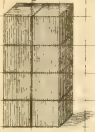
Floor.

4



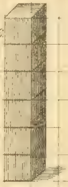
Wall.

5



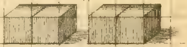
Wall.

6.



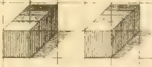
Column.

7.



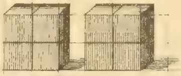
2 Boards.

8



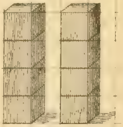
2 Beams.

9



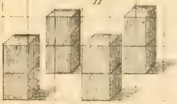
2 Walls.

10.



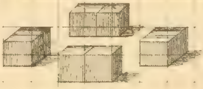
2 Columns

11



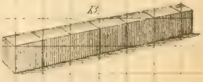
Four Columns

12



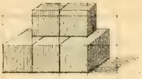
Beams

13.



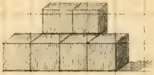
One Beam.

14.



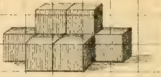
Seat for three.

15.



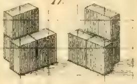
Garden Seat

16.



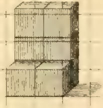
Garden Seat for three.

17.



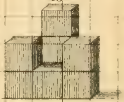
Garden Chairs.

18.



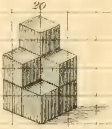
Chair.

19.



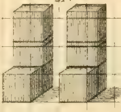
Arm Chair.

20



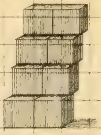
Throne.

21.



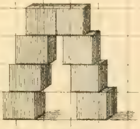
Two Chairs.

22.



Steps.

23.



Double Steps.

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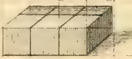
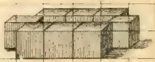


Well.

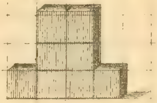
25.



Tanck.

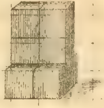
V.

26



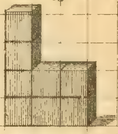
Monument

27.



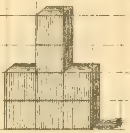
Monument

28



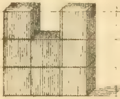
Church

29.



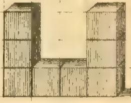
Station House.

30



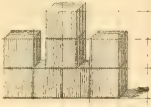
Castle

31



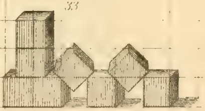
Castle.

32



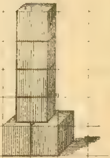
Tower

33



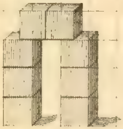
Ruined Castle

34.



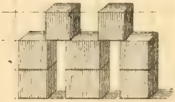
Column of Honour.

35.



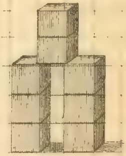
Triumphal Arch.

36.



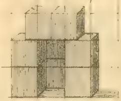
City Gate

37.



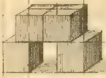
Door of the Tower.

38.



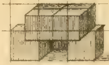
Niche

39.



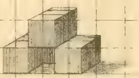
Bridge.

40.



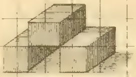
Hole under ground

41



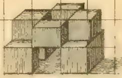
Oven

42.



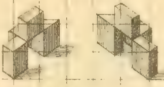
Covered Passage.

43.



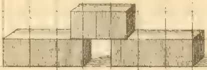
Covered cross Passage.

44



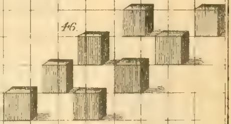
Two Garden houses.

45.



Garden Wall.

46.



Avenue.

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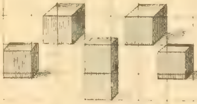

Shepherd and Flock

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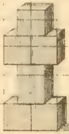

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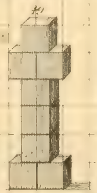

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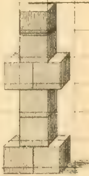

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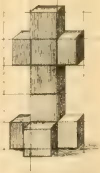
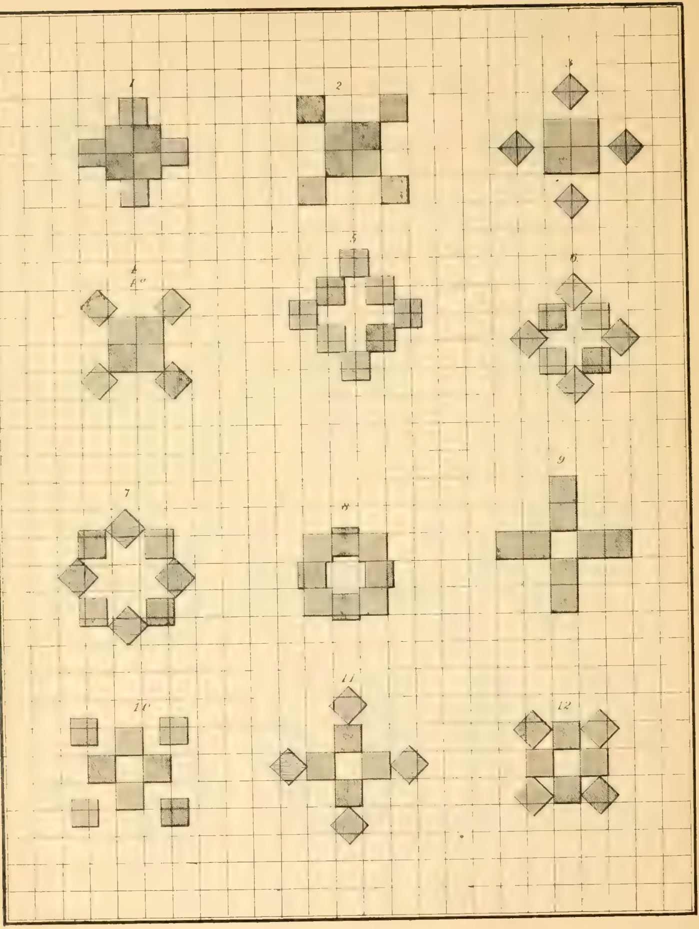
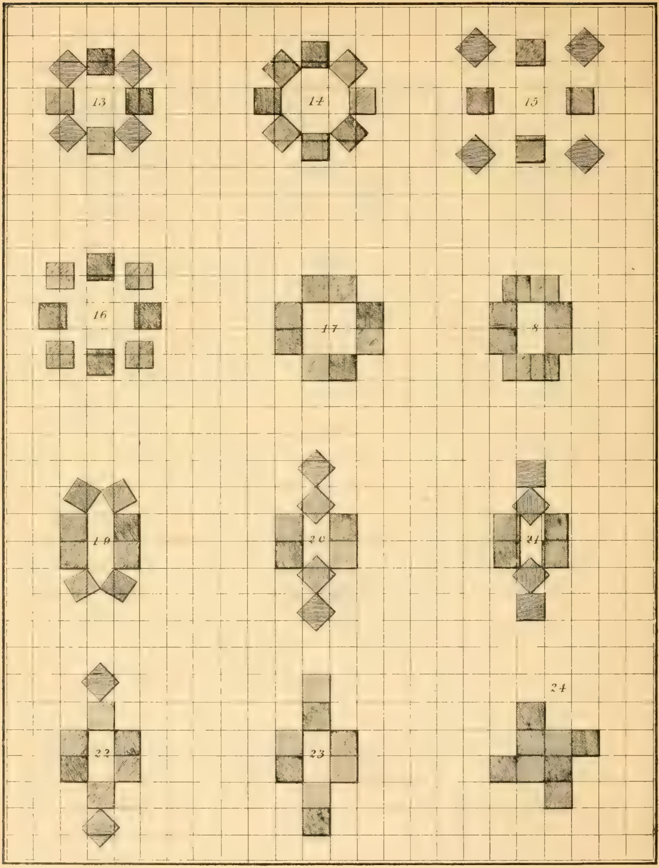


Crosses.

THIRD GIFT. *Plate* VII.



THIRD GIFT. *Plate* VIII.



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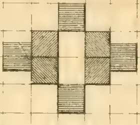

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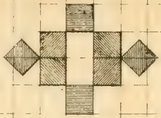

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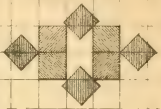

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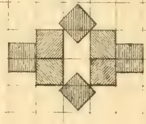

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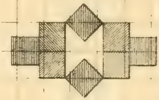

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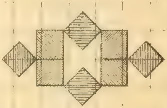

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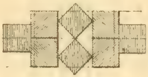

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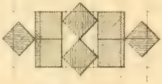

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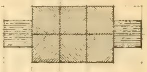

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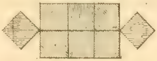

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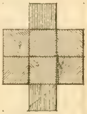

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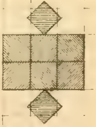

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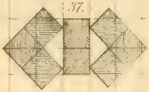

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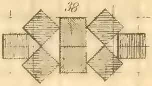

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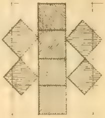

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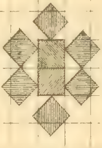

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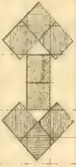

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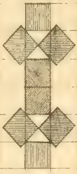

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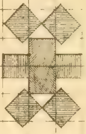

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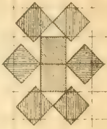

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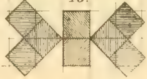

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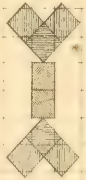

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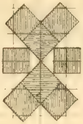

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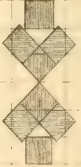

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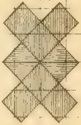

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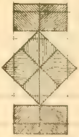

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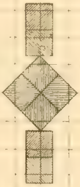

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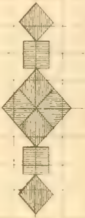

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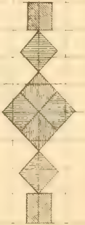

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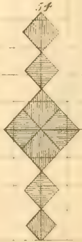

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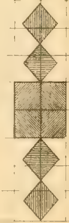

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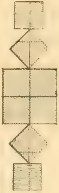

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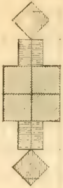

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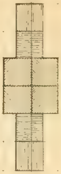

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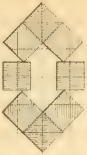

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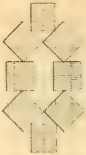

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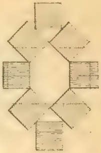

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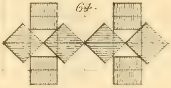

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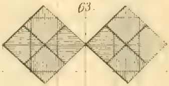

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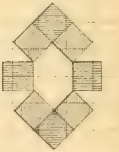

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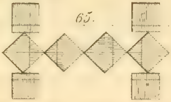

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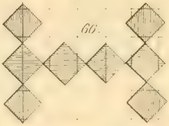

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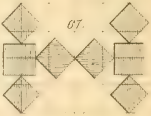

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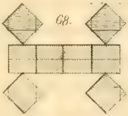

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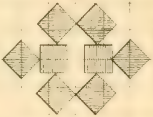

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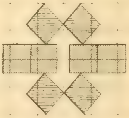
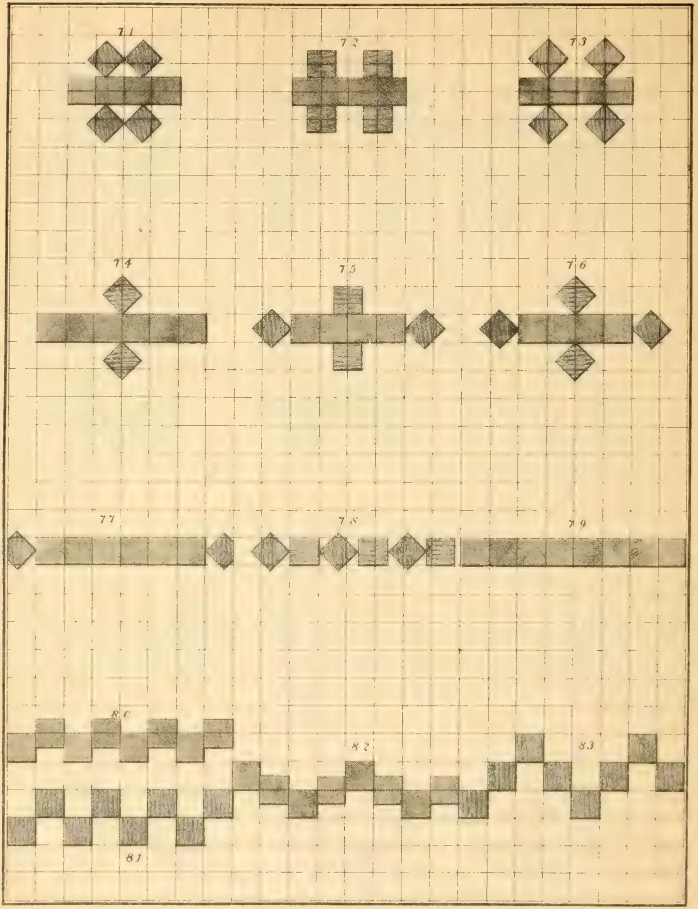
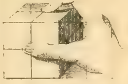


THIRD GIFT. *Plate* XII.

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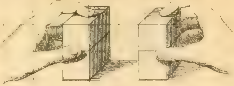
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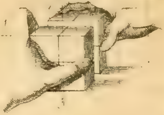
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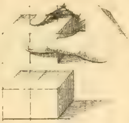
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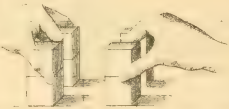
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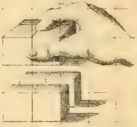
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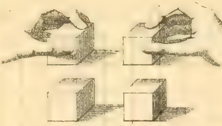
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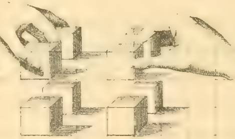
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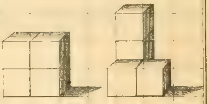
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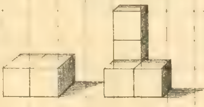
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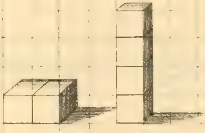
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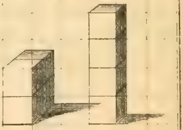

12.

So long as the child is happy it is not well to interfere; should additional aid be required, then let the teacher take her own box, and show one or more examples for the purpose of educing new ideas, and exciting to renewed activity.

There are three classes of exercises, one or more of each may be given during each lesson.

FORMS OF USE.

(Illustrations of which are given in Plates III., IV., V., and VI.)

After one or two examples, induce the child or the class to invent freely without any copy: let each form be accompanied with some pleasing tale. Suppose you would suggest a chair:—let us make a chair for papa, he is perhaps tired and wants to rest and talk to his little boy; let us make another chair for mamma, she would like to sit by him and talk to him; let us make another for grandmamma, she is coming to pay us a visit and to see her little grandson. Many interesting questions may be asked, Do you love mamma and papa? Do you ever grieve them? Do you try to make them happy? The first verse of song No. I, may be sung.

The following Plates and observations, are intended to assist the teacher by suggesting a course of exercises, which she will vary according to her fancy, to the circumstances in which she may be placed at the time, and to the subjects most vivid in her own mind.

1. She may invert her box, remove it, and addressing her little charge, say,—Look, my dear children; what have I done? What have I here? Give me its name. Tell me how many parts it has. How many faces, edges, corners?

2 & 3. I remove the upper half and place it beside the lower half. Who can tell me what this is like? *A.* A board,—a floor,—a wood pavement. *Q.* Did you ever see a wood pavement? Did you ever hear an omnibus pass over a wood pavement? Would you have known that it was passing over a wood pavement if you had not seen it? Does it make the same noise as when it passes over a stone pavement?

4. What have I made now? Is it not like a wall? What kind of a wall? A long wall, or a short wall? A high wall, or a low wall? How high is it? How many cubes high?

5. This is a high wall, but thin—tall, not strong. How high is it? Two, three, four,—four cubes high. Did you ever see a high wall, so high that you could not reach the top? Where have you seen such a wall? Why do people build such high walls?

6. See now, it rises higher, higher, higher; the centre of one is exactly over the centre of every other. What is this? Did you ever see a pillar? Where? In the church? In the school? What is the use of the pillar? If we take down the pillars in a church, what will take place? Would not a wall support the

roof of a building as well as a pillar? What must we place on the top of a pillar to enable it to support the roof? A beam,—a long beam,—a strong beam. Which way must it be placed? On the end or the side?

7 & 8. Let us make beams to put on the pillars, in order to support the roof,—a short beam, a long beam. How do men make beams? What do we call the men who saw the wood? Can we sing "The Sawyer?" Let us now begin our sawing. (Song, No. XVIII.)

9. Here we have equality again, centre joins centre. What are they like? Two pillars, one on each side of the entrance. What else? Are they strong or weak?

10. Now what have I made? Still the corners and edges are the same, centre is upon centre, the number is the same, but higher. How high?

11. Still the edges are the same, the faces the same, the corners the same; they are in the same position, like pillars, but shorter, and twice the number. Here are four. What kind of a roof will they support? Will they do for four milestones? four columns?

12. Now they are all resting on the table like four beams, they form a beautiful street of eight corners. Count the corners. Look at their position.

13. What is this? Here they lie face to face in a straight line; what a long beam they make! eight cubes long. What is it like? Look at it. Take one from either end, and what is the result? Is it not shorter? Take any of the others away; what then? It is no longer one.

14. Here is a comfortable seat. How many can sit upon it? Three. Who must sit upon it? Mamma, papa, and grandmamma. Who must sit in the middle? What shall we talk about?

15. Let us make a seat in the garden, where we can sit down when we are tired and look at the pretty flowers, and breathe the sweet air, and watch the little insects flying about, and listen to the charming songs of the birds. O, how warm is the air! how bright is the sun! how lofty are the trees!

16. Here is a seat for three,—it will do for teacher and two little children,—we will sit and learn. What shall we learn? Names of flowers and fruits, of shrubs and trees, of insects and birds; that we may be able to talk of them when we do not see them.

17. What are these? Chairs. Now papa and mamma can sit, and read or talk, while we gather pretty flowers in a nosegay, and remove the stones from the border, which prevent the little slender plants from coming through. Where does the plant come from? The gardener puts a seed in the ground, and after awhile it swells, then bursts; out of its eye springs two threads, one goes down and forms the root, the other rises and forms the stem: it is now coming through, by and by it will be longer, and you will see what will grow out of it.

18. Here is a chair with a high back; now papa can rest his head. Where shall it stand? In what room? In what part?

19. Here is one with arms and back. O, what a comfortable chair! Grandmamma must sit here when she comes to see her little children, and tell them tales about good little boys and kind little girls. Now she can sit at ease, and rest her back and sides, and lean this way and that way.

20. What is this? A throne. Who sit on thrones? You never saw a throne. Kings and Queens sit on thrones on public occasions.

21. Are these thrones or chairs? What is the difference? Where can we place them? When can we use them?

22. Here are very useful things; what are their names? Steps. Where do we find steps? Why do we require steps? How do you go into the kitchen? down the steps or up the steps? If you are not careful what will become of you? Which way will you fall, up or down? What kind of steps will hurt you most if you fall, wood or stone? steps with sharp edges or with rounded edges?

23. What kind of steps are those you can go up on one side and down on the other, and move from place to place? They will do for the garden and the orchard. We can now reach the grapes, apples, pears, plums, cherries, and all fruits that grow on high trees. Be careful! Little John fell down and broke his arm. O, how he did cry! it was so painful; and when it was set he had to wear a bandage, and could not use his hand for a long time. Be careful now on the top. What can you see? O, such a long way, such high hills, such pretty fields, such bright waters: there are sheep, and cows, and horses, such a little horse,—a little baby horse,—O, how he does frisk about.

24. Here is a well. What is a well? What is there in it? Where does the water come from? What is the use of it? Do you like to bathe in water? little birds like to bathe, and it makes them so happy, so merry, so healthy. Little Charles likes to bathe, and he looks so rosy, so nice, and so cheerful after his bath. The little flowers cannot go to the bath, so the dew bathes them; and they are lovely and smell sweet after their bath. O, how useful is water! it refreshes the plants, quenches our thirst, &c.

25. Here is a tank, or a trough. Did you ever see one? Where? What flows into it? Where does it come from? Who drink out of it?

26 & 27. Here is a monument: did you ever see one? Where? In the cemetery, —church-yard. What is the writing on it? It gives the name of a good man who lived a long time ago, and tried to make every body happy. Can John build a monument? Whom for? Shall he build one for little George, who went to seek his marble in a close cellar and was found choked with the bad

air. Poor little boy, he did not know that bad air floated near the floor, and he lay down to look for his marble and never rose again. Little Sarah may build one for dear little Fanny, who was burned to death; she played with the fire, lighted bits of paper to look at the pretty sparks, and her clothes caught fire, and she ran about crying for help, but the fire would not wait, it burned more and more, the more she ran the more it flamed; and when she was found, her dear face was disfigured, her hands and arms and neck were all burned to a cinder, and she soon died. If she had been rolled in a carpet or hearth-rug, she might have been saved: had she not played with the fire she would not have been burnt. Who will build a monument for the little boy who ran across the street when the omnibus was coming, and was crushed with the wheels. Little Albert, build one for the little boys who went to bathe without asking papa and mamma, and did not know that the water was deep: they could not swim; and both were drowned.

28. What is this? A church. Did you ever see a church? Where? Why do people go to church? What is that high tower on the top? What is that which sounds in the high tower?

29. People call this a station house, where the policemen can be found.

30. Here is a high castle with two short towers.

31. Here is a low castle with two high towers.

32. Here is a castle with two short towers and one long tower.

33. A ruined castle. Where buildings are not repaired, the lime crumbles away and the stones become loose, and down they fall; they do not always fall completely down, but they are not fit to live in, and people desert them, and grass and moss grow on them, birds build their nests among the crumbling stones, and people call them ruins.

34. Let us build a pillar of honour to Fred Frobel. He made the first Kinder Garten; he loved little children; and when he died little children strewed flowers on his grave; and every year they meet to talk about him, and tell each other what good he had done them, and when they play they always think of him.

35. We will now build a triumphal arch.

36. City gate. Formerly cities had walls built round them, and had large gates, which were guarded for the purpose of keeping people out who might do harm. In times of peace they are not needed, but still they remain to tell us of the past. We have Temple Bar in London.

37. Some of those gates have towers on the top where the guards lived, who would look out to see when danger was near.

38. We will make a wall with a niche in it, where we can place a statue,—the

statue of some one whom we loved, and want to remember. Who shall it be? Shall it be the statue of the man who invented the steam-engine? What was his name? You have seen a steam-engine; by it steam-boats are moved on the water, and railway carriages on the land, water is pumped out of wells and mines, and machines moved, by which cotton, and silk, and worsted, and linen are woven.——Or who shall it be?

39. Let us make a bridge over the river that we may cross without wetting ourselves, and visit our friends who live on the other side. What do we call the sides of the river,—bottom,—the beginning,—the end? Banks, bed, source, mouth.

40. We will now make a burrow. Little rabbits make burrows. Many little animals live in burrows,—rats and mice, and moles, &c.

41. Who can make an oven to bake bread in? What do we call the man who bakes bread? What does he make it from? How does he make it? Why does he make it? How is the corn produced? Let us sing the "Peasant." (Song, No. XVII.)

42. Who has ever seen the tunnel that is made under the river Thames? it is a long tunnel, and it must be a strong tunnel, else the river would find its way into it. Who has ever passed through a railway tunnel? O, how dark it is under a hill; but the train soon passes through, and then it is light again. We can each make a little tunnel, and if we all unite we can make a long tunnel, and a train to pass through it.

43. Let us make a covered causeway, where we can play when it rains.

44. Now 'tis summer, days are long, weather is warm, the garden is the most pleasant place: let us have our breakfast in the garden, it is now ready. Oh, the rain is falling, what shall we do? Let us build two garden houses, and then papa and mamma can breakfast in one, and we can play in the other with the door open, and watch the big drops of rain as they fall, and the little birds as they fly.

45. Let us build a garden-wall with a doorway. We can train vines against the wall, and when the summer comes we shall have sweet grapes; we can plant tender shrubs behind the wall, and they will be sheltered from the wind: but we must have a doorway, or we shall have to climb over.

46. Let us make an avenue. Every cube shall be a tree: what kind of trees shall they be? Yew trees, oak trees, beech trees, chesnut trees, fir trees, bay trees, maple trees, ashes, willows? Who will make the yew-tree avenue?

47. Every one make a shepherd of two cubes, and give him four sheep. How many shepherds have we in all? How many sheep altogether? Could not a shepherd take care of more than four sheep? Let us unite and make many more sheep, and only one shepherd; but he must be a big shepherd, he must stand three times as high as a sheep. Who will make a little dog to help the

shepherd to take care of his sheep ? it must be a kind dog,—it may make a noise, but it must not bite the poor sheep.

48, 49, 50, and 51. Who can build a pretty cross to set up in the market place, where the dairyman can sell his butter? Who can make the prettiest cross? Make a nice little cross in memory of the first Kinder Garten. A long time since there was One who loved little children, took them in His arms and blessed them : people told Him not to do so,—they thought He should not condescend so low as to notice a little child,—but He heeded them not; He was very kind to all, and went about doing good : there were bad men who did not like Him, and they sought His life, and at last they nailed Him to a cross and killed Him.

General Forms of Beauty.

These forms are so called because they do not refer to any single object, yet they cannot be seen without giving delight.

In these forms it is best to commence at No. 1, and continue through the series that the child may learn by practice, that harmonious development does not imply destruction, but merely a very slight change in the position of existing elements; and that such changes require care and skill to effect them successfully.

When children perceive the method of developing those various forms, they can easily invent an endless variety ; when any child has invented a very beautiful form, let the attention of all be immediately directed to it.

When each in a class has produced a different form, it is well to allow the whole class to rise from their seats and march round the table to observe the variety. Let them sing in the ascending and descending scales—

I am coming now to see
Which of the forms best pleases me.

Remind them that the variety of forms are all produced from the same parts. Induce them to look at each other, and cause them to observe that each has one head, one nose, one mouth, one chin, one neck, one chest, two eyes, two ears, two cheeks, two shoulders, two arms, two hands, two legs, two feet; and yet they differ, they are not any of them alike, yet they are all complete; after such a digression let them try again. In all cases induce them to build from the centre, that as they progress they may always perceive that the groundform was the first step to all variety, and naturally refer to it as the basis of all future experiments ; by this they will be taught (unconsciously perhaps) that there is union in all things; and led to trace all beauty, whether in the flower or the starry heavens, the individual or society, to the Great Source of all good, beauty, and harmony.

FORMS OF RECOGNITION.

1 Induce the child first to examine the cube as a whole; to count its faces, edges, corners; to observe the lines by which each face is bounded and the angles formed by them, and when he can do so give him the best words to express his ideas.

2. Induce him to divide the cube into halves, and observe as before; point out the resemblance and the difference. He will find in each part the same number of faces, edges, corners, angles, and lines, but the faces differ in size,—two large, two small, two square, two oblong.

3. Let him divide it into quarters, and he will find they differ from the halves only in size.

4. Let him divide them into eighths, or single cubes, and he will find that each represents the whole; induce him to unite the whole again that he may fix the impression on his mind.

5. Let the whole class arrange their cubes in any given order, and count them; let each separate his own cube into halves, and all count again; each separate them into fourths, count again; and lastly, eighths, and count again,—backwards and forwards. Thus the faculty of number may be developed, and the names of sums best given.

6. Let them now arrange their cubes in any given order round the table; during this arrangement, which is capable of a great variety, let them sing. (Song, No. II.)

7. Cause them to arrange the cubes in the form of letters, and having spelled the name of a little boy or girl, let one make one letter, another the next, and so on: then let each spell it, and pronounce it; the same may be done with other names, care being taken not to give a word except to express an idea existing in the mind of the child. At the time when a name is formed the class may march, and sing, " Little John loves to wander," (Song, No. XXI.); altering the first three words, in order to use the name of each child in succession.

When children can build, it is as well to give them each time a practice in each form; and, in order to make them truly happy, to encourage them to sing songs appropriate to their employment.

Require each one to build a house like the one he lives in. While this is being done, converse with the children freely. Do you love your home? Why? Each will give a different answer. They may be taught to sing the second and third verses of the Song No. I.

Let all unite and make a village,—one supply a children's garden, another a school, a church, courthouse, cottage, villa, farmhouse, monuments.

In a pleasing manner each object may be made the subject of a little lesson.

An endless variety of delightful exercises may be thus given, and a vast amount of useful instruction acquired.

By this gift the first lessons in artistic skill are taught, the eye becomes accustomed to harmonious arrangement, and able to detect disorder, which would escape the notice of ordinary observers; the hand becomes trained to move objects with delicacy, and arrange them with a view to symmetry,—a habit essential in domestic life, to make home attractive, rather by the careful disposition of what in themselves are of little value, than by the accumulation of costly ornaments.

FOURTH GIFT.

A CUBE DIVIDED INTO EIGHT PLANES CUT LENGTHWAYS.

In this gift will be found the same number of parts, which admit of a greater variety of formations, not only filling but enclosing space.

If the child has perused the Third Gift with interest, this will give him increased delight.

A superficial observer will see little difference between this and the previous gift of eight cubes; he will conclude that there are only the same number, and that children play with one as well as the other.

On minute observation, however, it will be found that, though there is a resemblance there is also a very important difference, not only in the parts themselves, but in the numerous purposes to which they may be applied.

The fact that children who have played with both, always prefer these forms to the cubes, is a proof that they are calculated to promote their progressive development.

The great object of those games is to gratify the desire for further development, and it must always be borne in mind that this can only be accomplished by leading the children step by step,—not allowing them to take a second step before they are well acquainted with the first.

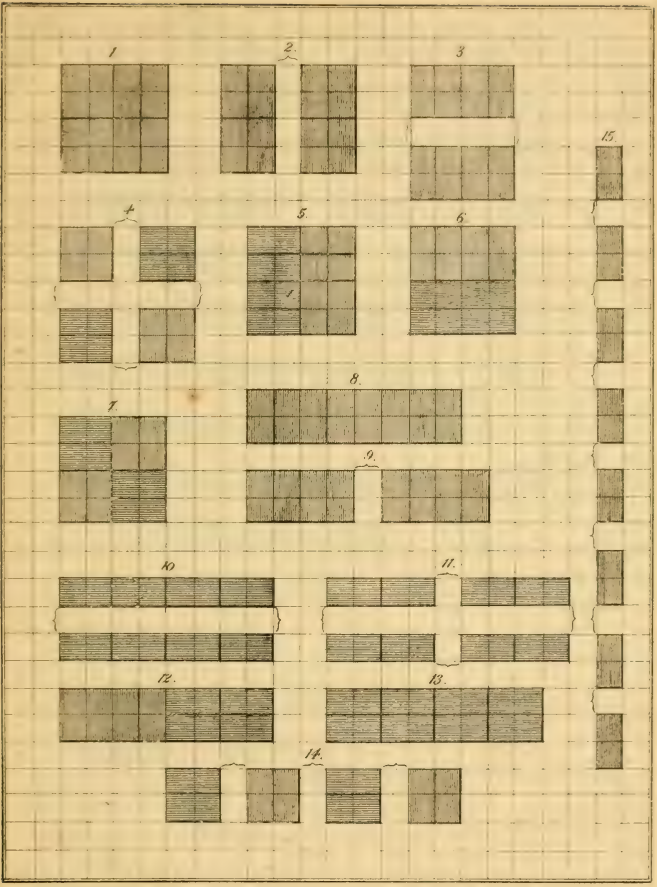
In this, as in the former games, each child is first allowed to exercise freely without any instruction ; having exhausted its own resources the work of the teacher commences.

All the parts are collected and put into the boxes, the boxes are inverted, the lids drawn out ; the boxes are then lifted up, when a cube divided into eight equal parts cut lengthways presents itself.

As in the former Gift each child is caused to divide the cube into two, four, and eight equal parts.

1. Each child is then induced to examine one part separately and point out its

XIV.



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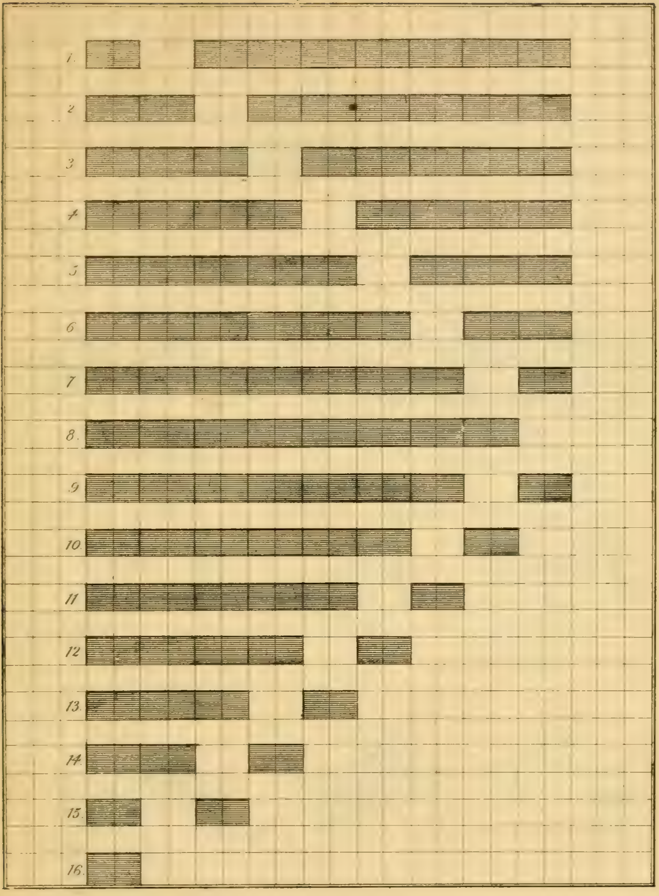

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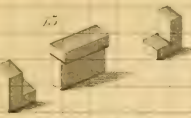
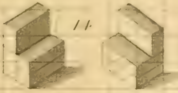


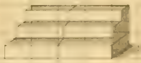
Table and two Chairs

14



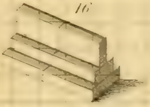
Two Seats

15



Seat and Footstool

16



Double Seat and Footstool

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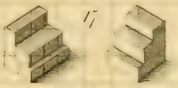

Two Forms and Footstool

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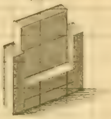

Easy Seat

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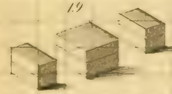
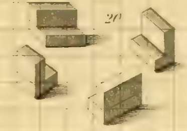


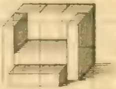
Grass Table and banks

20



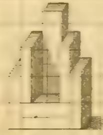
Seats for a Party

21



Seat with Back, Sides & Footstool

22



Throne

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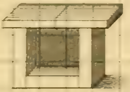
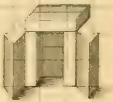


Open Garden house

24



Garden house with open Doors.

resemblance to the cube :—one will say it has the same number of faces ; a second, the same number of edges ; a third will find the same number of corners ; a fourth will discover the same number of angles ; a fifth will perceive that the faces of both are plane faces ; and a sixth that the angles of both are right angles.

2. Each child is then required to point out the difference between the cube and the parallelopiped :—one will observe that, though each has six faces, none of them are squares; a second will perceive that, while all the faces of the cube are equal, only two of these faces are equal to each other, and though they are similar in form they differ in size; a third will find out that, while the cube presents the same appearance when placed on any of its sides, the parallelopiped can be placed on one end, one side, or on its flat surface, and present a different appearance in each position; a fourth will discover that, though in any position it must occupy the same amount of space, yet when placed flat on the table, it covers as much surface as two cubes, that when placed on one side it only covers half as much surface, and when placed on one end only one quarter of the surface; while a fifth will discover that when flat on the table it is only as high as half a cube, when on one side it is the height of a cube, when on one side it is the height of two cubes.

It is desirable to elicit as much information from the children as possible, to listen with attention to all their discoveries, by indirect means to assist those who are unable to express their ideas, and to draw forth ideas from those whose intellectual powers may appear dormant.

The children may now begin to arrange the parts :—

1. Form the solid cube by placing the parts upon each other in two rows.
2. Lay them flat upon the table in two rows, side by side, so that they cover the greatest amount of surface, like the boards of a floor.
3. Separate them into two parts lengthways, like two planks.
4. Unite them again, and separate them in the middle into two equal portions, two pieces in breadth, two like beams.
5. Divide each into two equal parts, making four small boards.
6. Divide them again and place them at equal distances like building stones.
7. Place them on end, side by side, to represent a long wall.
8. Place them edgeways upon each other, to represent a high wall.

After this, seats of all kinds may be made,—long, short, high, low, single, double, with backs, without backs, with arms and without arms, with footstools and without footstools, and arranged in any position that may be deemed desirable. Each may be required to make a table, long or short, to make a table and two chairs for papa and mamma, to make an easy chair for grandpapa, and a seat with back, sides, and footstool for grandmamma.

These formations should be accompanied with little stories interspersed with songs, as in the previous games with the cube.

It will be perceived that, as the parts in this Gift contain a greater amount of surface than the cubes, and are capable of enclosing a still greater amount of space, a far greater variety of objects may be represented,—objects more lofty and spacious.

An endless variety of crosses, monuments, tablets, columns, and towers, may be made; illustrations of which are given in the Plates; with those erections, many important historical events may be associated, which a well-trained teacher will ever have at command. The tenderest chords of the human heart may be tuned, while erecting tablets to the memory of the just and the benevolent, which none can do so well as the affectionate mother, nurse, or teacher, who clearly perceives the philosophy of the Kinder Garten practice; the following examples may assist:—

Garden Seats and Table.

Q. Where are tables and little forms used in the open air?

A. In the garden,—on the lawn,—on the grass plot.

Q. When are they used?

A. In warm pleasant weather,—in Spring, Summer, and Autumn,—not in Winter, it is too cold.

Let us make a little table and some forms for grandmamma and her little children, and I will tell you a little tale about them.

Grandmamma, and Robert, and Emily, and Fanny, one fine morning went into the garden, and all the lovely flowers were so pretty, so sweet, and the grass was so green, and the sun so bright, and the air so warm, that everything seemed to say, Good morning to you all,—Good morning, children, be happy, be good, sing, and be merry. Each little flower seemed to say, Come and sit down by me and smell my sweet odours. The little children sat down and collected little flowers into nosegays to take home to papa and mamma;—there were the violet, the pink, the daisy, the wallflower, and many more.

They heard a little bird crying, "Peep, peep, peep." Robert said, "Hear the little bird, it is sorrowful; what can be the matter?" They looked up in the tree and there sat a great cat on one of the branches, and higher up in the tree was the nest of the bird with its young ones, and the poor thing cried again, "Peep, peep, peep;" so Robert took a stone and drove away the cat. Then the little bird flew out of his nest upon a branch of the tree, and sung a sweet little song to thank Robert for his kindness. And Robert was so glad that he had made the little bird happy that he sang too, and they all sang; and the flowers looked so pretty as if they were singing too. And the little children and grandmamma went home and told what had been done,—how Robert had protected the little bird,—and papa was pleased, and mamma was delighted, and said, "You did, dear Robert, as any good man would do who saw you in danger, and heard me call for help. He would come and assist." And she kissed little Robert, and told him always to defend the helpless.

House of Franklin.

You have heard the thunder and seen the lightning. Formerly the lightning destroyed houses, and killed many people,—fathers, mothers, children. People did not know how to prevent it; and hence they were more afraid of the thunder and the lightning than they are now.

There lived a very clever man in America, named Benjamin Franklin; he found out that a rod of iron with a golden point, fixed on the top of a house and continued down into the earth, would conduct the lightning into the earth, and prevent it doing mischief. Let us try to build a house like that in which he lived, and fix a lightning conductor to preserve it from danger of that kind.

House for Bees.

Have you all tasted honey? How very sweet it is. Have you all seen the little insects that collect it? What do you call them? Bees. Yes, bees collect honey from flowers,—pretty flowers,—they put the ends of their long trunks into the tubes of the flowers, and suck the honey out of them: when they have got as much as they can carry, they fly home with it, and put it carefully by in little six-sided cells, called honey-combs. Did you ever see a honey-comb? it is made of yellow wax; the bees make it themselves. They are very industrious little insects. Men make hives for bees to live in, and little houses to put the hives in. Let us try to make one of those houses, (No. 41, Plate XVIII.), and while we make it we can talk about the bees.

They get up early in the morning, when the sun rises, and away they go, many together, humming sweet music to tell us they are happy, and working away to tell us they are not idle. Good little children are like bees, they like to do something useful, they like what is sweet, they sing sweetly, and those who know them say what sweet little children they are.

Cenotaph.

Let us now build a cenotaph. Do you know what a cenotaph is? Have you never seen a large monument with writing on it in a grave-yard, that is to tell you who has been buried there; but a cenotaph is a stone that is set up to the memory of some one who is not buried under it, perhaps he may have been killed in battle a long way off. Who would like to build a cenotaph to Nelson, Bruce, Wallace, William Tell?

Monument.

Let us build a monument. Have you all seen a monument? There are many kinds of monuments; you see them in the cemeteries and in public places, some of one form, some of another.

We will build one like a column, such as are often erected in memory of some great event or some very useful person. The London monument was built to remind us of a great fire that once burned a great part of London : Nelson's monument is built to remind us of Nelson, a very brave man, a sailor, who defended England many times, and lost his life in battle.

No. 29, Plate XVIII. We will build a monument to the man who invented the printing press. There was a time when books had to be all written, and there were very few of them, and they were very dear. A man named Guttenburg invented a machine by which books could be printed quickly: was he not a very useful man? yet many people did not like him for doing this good, they did not want to see many books quickly printed, and they persecuted him, and tried do him great injury. After he was dead, people found out the use of his invention, and they built a monument to his memory.

Let us build a monument on the twelfth of January to the memory of Pestalozzi; he loved children,—lived for children,—he was the teacher of Froebel who invented the Kinder Garten.

Each teacher would do well to associate with certain dates some historical event of importance, as it would be useful not only to the children but to themselves; all would look forward with interest to those days, when the memory would be refreshed by recollections of the brave, the useful, and the good ; it would give a zeal to investigation, and strengthen the memory so far as dates are concerned.

Children experience much delight in forming those objects which enclose a portion of space, as a well, a mine, &c., and much valuable instruction may be given in connection with them.

The illustrations of developed power, as given in Plate XIX., are capable of affording much delight, and exciting the enquiring mind to thoughtfulness.

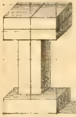
We have seen children after having formed winding stairs, such as No. 80 and 81, Plate XXI., examine them on all sides, and wonder why they did not fall, press upon each step with their little fingers, place small objects upon them, and look on all sides to see where the stairs would give way first.

With this Gift a very interesting village may be made by the co-operation of a class, and much valuable instruction conveyed by the teacher while commenting on the various parts.

The forms of beauty are similar in many respects to the previous Gift,—they admit of greater variety in consequence of the different appearance of the parts when placed flat on one side or on one end.

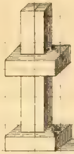
The general remarks in the Third Gift, however, apply equally to this.

25



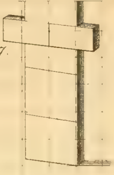
Shadow Seat.

26



Chiniese Seat

27.



Guide Post

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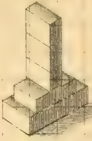

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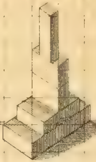
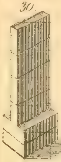


Two Monuments

30.



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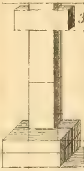
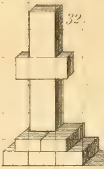


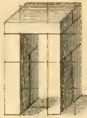
Two Monuments.

32.



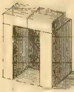
Gravestone.

33



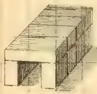
Trumphal Arch.

34.



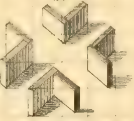
Wath Box

35



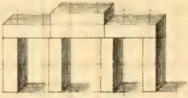
Covered passage.

36



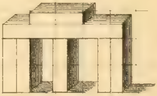
Cross Street.

37.



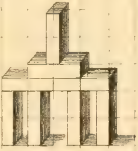
City Gates with 3 Doors

38.



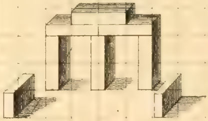
with 2 Doors.

39.



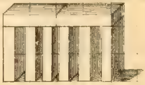
Brandenbourgh Door in Berlin.

40



Double Door with Watch & Toll Gate

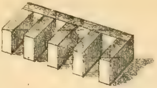
41.



House of Press.

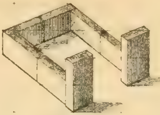
XIX.

42



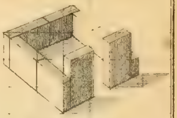
Horse Stable

43



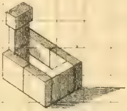
Open Garden

44



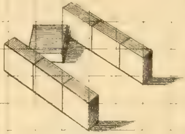
Riding School

45.



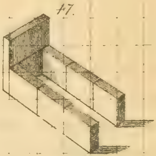
House and Yard.

46



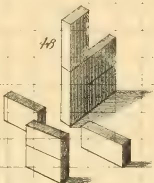
Skittle Ground.

47.



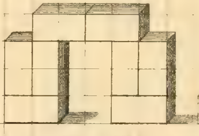
Shooting Gallery.

48



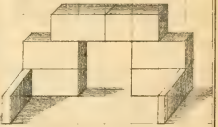
Village.

49.



Triuphal Arch.

50.



Castle Door.

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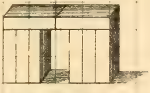

Roman triumphal Arch.

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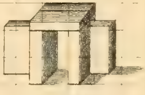

Passage

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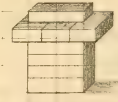

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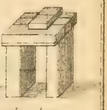

Shut & open Garden house.

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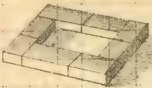
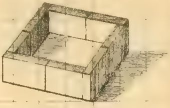


Tomb.

56



Church Yard.

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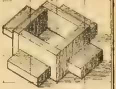
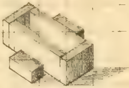


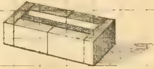
Well with Four Seats

58

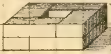


Wall with 2 Seats

59

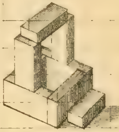


Sink



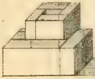
Well. 60

61.



Draw Well.

62



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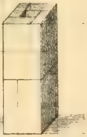
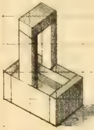


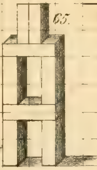
Shaft of a mine.

64.



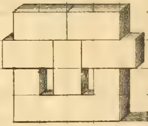
Basket.

65.



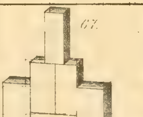
Bell Tower.

66.



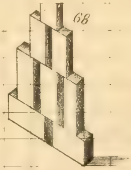
Wall with Windows.

67.



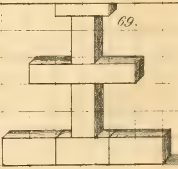
Buttery Wall

68



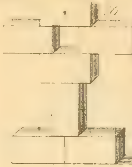
Pointed Column.

69.



Cross with Seat

70



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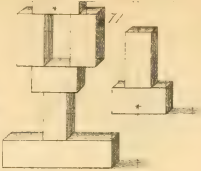
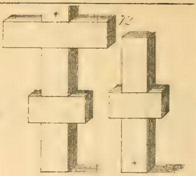


Shooting Points

72



Great Cross

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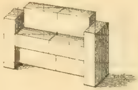

Writing Desk

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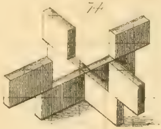
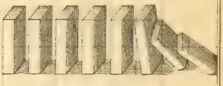


Round about.

75



Developed Power

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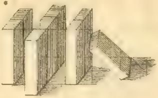

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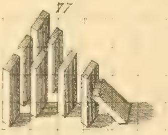

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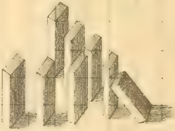
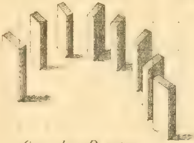


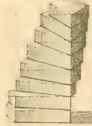
Power of Resistance.

79



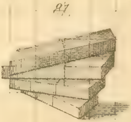
Circular Position.

80

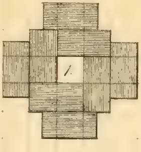


Winding Stair.

81.



Double Winding Stair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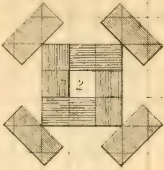
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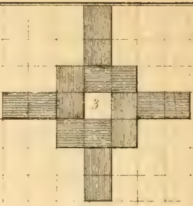
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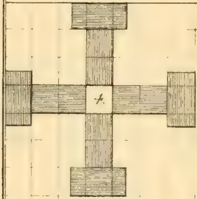
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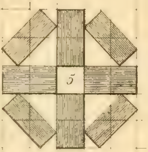
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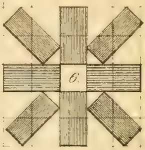
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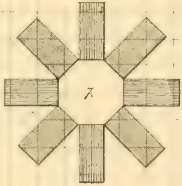
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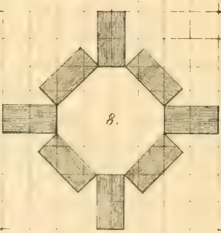
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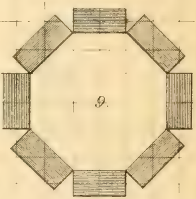
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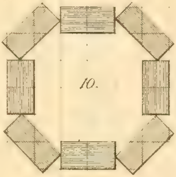
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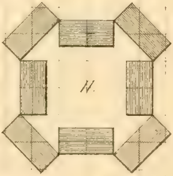
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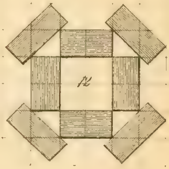
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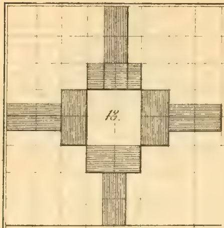

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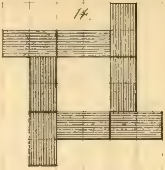

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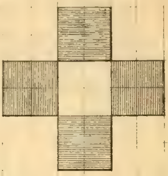

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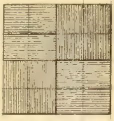

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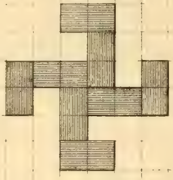

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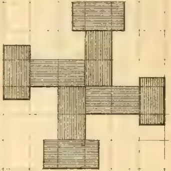

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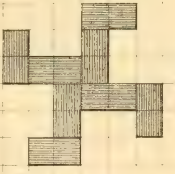

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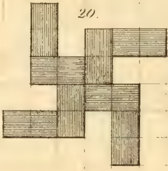

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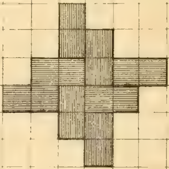

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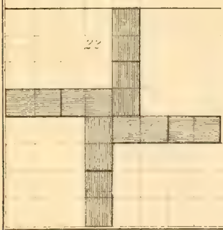

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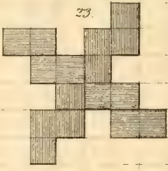

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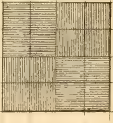

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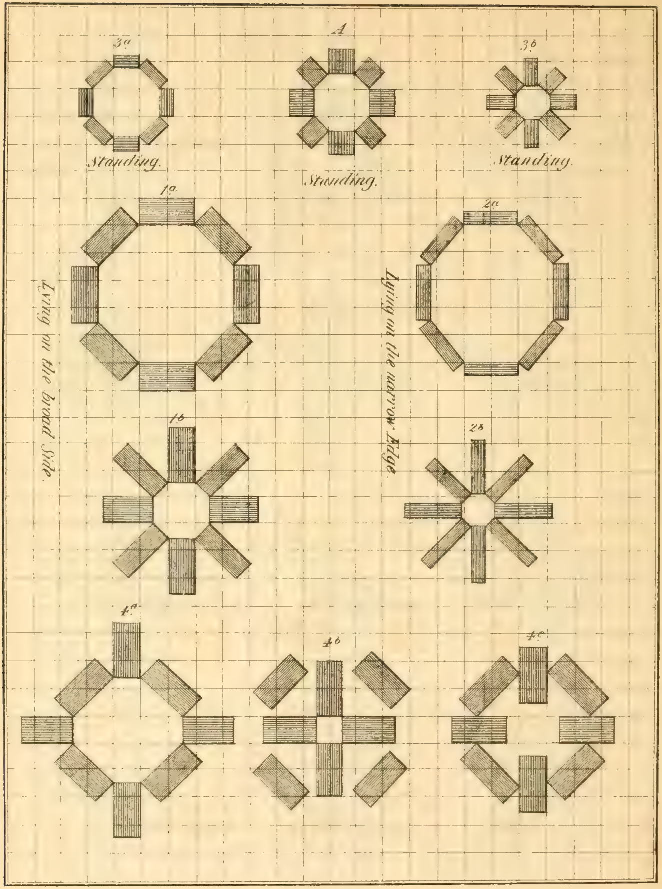
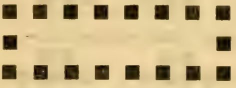

3a
A
3b
Standing.
Standing.
Standing.
1a
2a
Lying on the broad Side.
Lying on the narrow Edge.
1b
2b
4a
4b
4c

Lessons in Number and Form.

Addition and Subtraction.

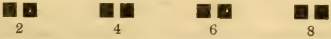
I.

Place the cubes of a whole class round the table.

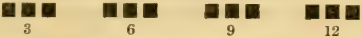


1. Let the whole class march round the table pointing at each cube, and if practicable, touching each, and singing in the ascending and descending scales, 1, 2, 3, 4, &c.

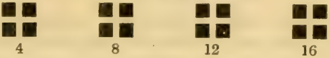
2. Arrange them in twos. March round and sing,—



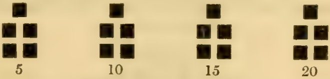
3. Arrange them in threes. March round and sing,—



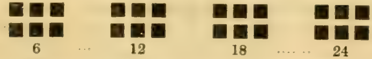
4. Arrange them in fours. March round and sing,—



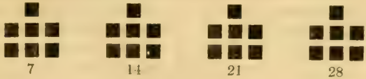
5. Arrange them in fives. March round and sing,—



6. Arrange them in sixes. March round and sing,—



7. Arrange them in sevens. March round and sing,—



8. Arrange them in eights. March round and sing,—

9. Arrange them in nines. March round and sing,—

10. Arrange them in tens. March round and sing,—

II.

Pursue the same course as before, with this addition: when they have arrived at the end of each journey let them turn round and count backwards. Suppose 100 be the highest number, 99, 98, 97, 96, 95, 94, 93, 92, 91, 90, 89, 88, &c.

III.

Arrange as before, but change the terms used: say 1 and 1 are 2, 2 and 1 are 3, up to the highest number; and on returning, 100 less 1 leaves 99, 99 less 1 leaves 98, 98 less 1 leaves 97, &c.

Pursue this course through all the divisions into twos, threes, fours, and so on up to tens.

IV.

Multiplication and Division.

Arrange as before, and march, and point, and sing,—

Twice 1 are 2, the ones in 2 are 2
3 times 1 ... 3, ... 3 ... 3
4 ...... 1 ... 4, ... 4 ... 4
5 ...... 1 ... 5, ... 5 ... 5
6 ...... 1 ... 6, ... 6 ... 6
7 ...... 1 ... 7, ... 7 ... 7
8 ...... 1 ... 8, ... 8 ... 8
9 times 1 are 9, the ones in 9 are 9
10 ...... 1 ... 10, ... 10 ... 10

Twice 2 are 4, the twos in 4 are 2
3 times 2 ... 6, ... 6 ... 3
4 ...... 2 ... 8, ... 8 ... 4
and so on up to ten.

3 times 3 are 9, the threes in 9 are 3
4 ...... 3 ... 12, ... 12 ... 4
5 ...... 3 ... 15, ... 15 ... 5
6 ...... 3 ... 18, ... 18 ... 6
and so on up to ten.

4 times 4 are 16, the fours in 16 are 4
5 ...... 4 ... 20, ... 20 ... 5
6 ...... 4 ... 24, ... 24 ... 6
7 ...... 4 ... 28, ... 28 ... 7
and so on up to ten.

5 times 5 are 25, the fives in 25 are 5
6 ...... 5 ... 30, ... 30 ... 6
7 ...... 5 .. 35, ... 35 ... 7
and so on up to ten.

6 times 6 are 36, the sixes in 36 are 6
7 ...... 6 ... 42, ... 42 ... 7
and so on up to ten.

7 times 7 are 49, the sevens in 49 are 7
8 ...... 7 ... 56, ... 56 ... 8
and so on up to ten.

8 times 8 are 64, the eights in 64 are 8
9 ...... 8 ... 72, ... 72 ... 9
10 ...... 8 ... 80, ... 80 ... 10

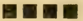
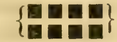
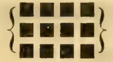
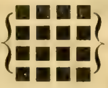
9 times 9 are 81, the nines in 81 are 9
10 ...... 9 ... 90, ... 90 ... 10

10 times 10 are 100, the tens in 100 are 10

In this manner multiplication and division will be so connected in the mind that the one will always assist the other.

Of course a few exercises will be sufficient at one time.

Suppose the cubes arranged in fours: each child in the class points at the four cubes opposite to him, and sings,—

4 ones are 4		In 4 there are 4 ones.
4 twos are 8		8 .... 4 twos.
4 threes are 12		12 .... 4 threes.
4 fours are 16		16 .... 4 fours.

and so on to the end.

After this reverse the order of the song, and say,—

In 4 there are 4 ones.	4 ones are 4.
In 8 there are 4 twos.	4 twos are 8.
In 12 there are 4 threes.	4 threes are 12.
In 16 there are 4 fours.	4 fours are 16.

Let one number be well mastered before proceeding with another.

V.

Fractions.

Place one cube upon another ■■ and call it a pillar, one pillar. Take one cube ■ away. What part of the pillar is this? One half. How many halves has the pillar? Two halves.

Erect a pillar with 3 cubes ■■■. Take away $\frac{1}{3}$ ■, $\frac{2}{3}$ ■■ remain. Take away $\frac{2}{3}$ ■■, and $\frac{1}{3}$ ■ remains.

Erect a pillar with 4 cubes ■■■■. Take away $\frac{1}{4}$ ■, $\frac{3}{4}$ ■■■ remain. Take away $\frac{2}{4}$ or $\frac{1}{2}$ ■■, and $\frac{2}{4}$ or $\frac{1}{2}$ ■■ remain. Take away $\frac{3}{4}$ ■■■, and $\frac{1}{4}$ ■ remains. ■ $\frac{1}{4}$ and ■ $\frac{1}{4}$ equal ■■ $\frac{2}{4}$ or $\frac{1}{2}$. ■■ $\frac{2}{4}$ and ■ $\frac{1}{4}$ equal ■■■ $\frac{3}{4}$. ■■■ $\frac{3}{4}$ and ■ $\frac{1}{4}$ equal ■■■■ $\frac{4}{4}$ or 1 complete pillar.

Make a beam of 5 cubes ■■■■■. Take away ■ $\frac{1}{5}$, ■■■■ $\frac{4}{5}$ remain. Take away ■■ $\frac{2}{5}$, ■■■ $\frac{3}{5}$ remain. Take away ■■■ $\frac{3}{5}$, ■■ $\frac{2}{5}$ remain. Take away ■■■■ $\frac{4}{5}$, ■ $\frac{1}{5}$ remains. ■ $\frac{1}{5}$ and ■ $\frac{1}{5}$ make ■■ $\frac{2}{5}$, ■■ $\frac{2}{5}$ and ■ $\frac{1}{5}$ make ■■■ $\frac{3}{5}$, ■■■ $\frac{3}{5}$ and ■ $\frac{1}{5}$ make ■■■■ $\frac{4}{5}$, ■■■■ $\frac{4}{5}$ and ■ $\frac{1}{5}$ make ■■■■■ $\frac{5}{5}$, or one complete beam.

Make a board of 6 cubes ■■■■■■. Take away ■ $\frac{1}{6}$, ■■■■■ $\frac{5}{6}$ remain. Take away ■■ $\frac{2}{6}$ or $\frac{1}{3}$, and ■■■■ $\frac{4}{6}$ or $\frac{2}{3}$ remain. Take away ■■■ $\frac{3}{6}$ or $\frac{1}{2}$, and ■■■ $\frac{3}{6}$ or $\frac{1}{2}$ remains. Take away ■■■■ $\frac{4}{6}$ or $\frac{2}{3}$, and ■■ $\frac{2}{6}$ or $\frac{1}{3}$ remains. Take away ■■■■■ $\frac{5}{6}$, and ■ $\frac{1}{6}$ remains. ■ $\frac{1}{6}$ and ■■ $\frac{2}{6}$ or $\frac{1}{3}$ make ■■■ $\frac{3}{6}$ or $\frac{1}{2}$, ■■■ $\frac{3}{6}$ or $\frac{1}{2}$ and ■ $\frac{1}{6}$ make ■■■■ $\frac{4}{6}$ or $\frac{2}{3}$, ■■■■ $\frac{4}{6}$ or $\frac{2}{3}$ and ■ $\frac{1}{6}$ make ■■■■■ $\frac{5}{6}$, ■■■■■ $\frac{5}{6}$ and ■ $\frac{1}{6}$ make a complete board of ■■■■■■ cubes.

Pursue the same course with any number of cubes until the children can add and subtract fractions readily.

1. Arrange 24 cubes in a straight line, thus,—

■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
$\frac{1}{24}$	$\frac{2}{24}$	$\frac{3}{24}$	$\frac{4}{24}$	$\frac{5}{24}$	$\frac{6}{24}$	$\frac{7}{24}$	$\frac{8}{24}$	$\frac{9}{24}$	$\frac{10}{24}$	$\frac{11}{24}$	$\frac{12}{24}$	$\frac{13}{24}$	$\frac{14}{24}$	$\frac{15}{24}$	$\frac{16}{24}$	$\frac{17}{24}$	$\frac{18}{24}$	$\frac{19}{24}$	$\frac{20}{24}$	$\frac{21}{24}$	$\frac{22}{24}$	$\frac{23}{24}$	$\frac{24}{24}$

2. Divide them in twos.

■■	■■	■■	■■	■■	■■	■■	■■	■■	■■	■■	■■
$\frac{2}{24}$	$\frac{4}{24}$	$\frac{6}{24}$	$\frac{8}{24}$	$\frac{10}{24}$	$\frac{12}{24}$	$\frac{14}{24}$	$\frac{16}{24}$	$\frac{18}{24}$	$\frac{20}{24}$	$\frac{22}{24}$	$\frac{24}{24}$
or	or	or	or	or	or	or	or	or	or	or	or
$\frac{1}{12}$	$\frac{2}{12}$	$\frac{3}{12}$	$\frac{4}{12}$	$\frac{5}{12}$	$\frac{6}{12}$	$\frac{7}{12}$	$\frac{8}{12}$	$\frac{9}{12}$	$\frac{10}{12}$	$\frac{11}{12}$	$\frac{12}{12}$

3. Divide them in threes.

■■■	■■■	■■■	■■■	■■■	■■■	■■■	■■■
$\frac{3}{24}$	$\frac{6}{24}$	$\frac{9}{24}$	$\frac{12}{24}$	$\frac{15}{24}$	$\frac{18}{24}$	$\frac{21}{24}$	$\frac{24}{24}$
or	or	or	or	or	or	or	or
$\frac{1}{8}$	$\frac{2}{8}$	$\frac{3}{8}$	$\frac{4}{8}$	$\frac{5}{8}$	$\frac{6}{8}$	$\frac{7}{8}$	$\frac{8}{8}$

4. Divide them in fours.

■■■■	■■■■	■■■■	■■■■	■■■■	■■■■
$\frac{4}{24}$	$\frac{8}{24}$	$\frac{12}{24}$	$\frac{16}{24}$	$\frac{20}{24}$	$\frac{24}{24}$
or	or	or	or	or	or
$\frac{1}{6}$	$\frac{2}{6}$	$\frac{3}{6}$	$\frac{4}{6}$	$\frac{5}{6}$	$\frac{6}{6}$

5. Divide them in sixes.

■■■■■■	■■■■■■	■■■■■■	■■■■■■
$\frac{6}{24}$	$\frac{12}{24}$	$\frac{18}{24}$	$\frac{24}{24}$
or	or	or	or
$\frac{1}{4}$	$\frac{2}{4}$	$\frac{3}{4}$	$\frac{4}{4}$

6. Divide them in eights.

■■■■■■■■	■■■■■■■■	■■■■■■■■
$\frac{8}{24}$	$\frac{16}{24}$	$\frac{24}{24}$
or	or	or
$\frac{1}{3}$	$\frac{2}{3}$	$\frac{3}{3}$

7. Divide into twelves.

■■■■■■■■■■■■	■■■■■■■■■■■■
$\frac{12}{24}$ or $\frac{1}{2}$	$\frac{24}{24}$ or one whole line of 24 cubes.

A similar course may be adopted with any other combination.

Multiplication and Division of Fractions.

Make a board of 24 cubes.

■■■■■■■■
■■■■■■■■
■■■■■■■■

Multiply ■ ■ $\frac{1}{12}$ by 3 = ■■ ■■ ■■ $\frac{3}{12}$ or $\frac{1}{4}$. Divide ■■ ■■ ■■ $\frac{3}{12}$ or $\frac{1}{4}$ by 3 = ■ ■ $\frac{1}{12}$.

Multiply ■■ ■■ $\frac{1}{6}$ by 2 = ■■■■ ■■■■ $\frac{2}{6}$ or $\frac{1}{3}$. Divide ■■■■ ■■■■ $\frac{2}{6}$ or $\frac{1}{3}$ by 2 = ■■ ■■ $\frac{1}{6}$.

Multiply ■ ■ ■ $\frac{1}{8}$ by 5 = ■■■■■ ■■■■■ ■■■■■ $\frac{5}{8}$. Divide ■■■■■ ■■■■■ ■■■■■ $\frac{5}{8}$ by 5 = ■ ■ ■ $\frac{1}{8}$.

Multiply ■■ ■■ ■■ $\frac{1}{4}$ by 3 = ■■■■■■ ■■■■■■ ■■■■■■ $\frac{3}{4}$. Divide ■■■■■■ ■■■■■■ ■■■■■■ $\frac{3}{4}$ by 3 = ■■ ■■ ■■ $\frac{1}{4}$.

Multiply ■ $\frac{1}{24}$ by 12 = ■■■■ ■■■■ ■■■■ $\frac{12}{24}$ or $\frac{6}{12}$ or $\frac{3}{4}$.

Divide ■■■■ ■■■■ ■■■■ $\frac{12}{24}$ or $\frac{6}{12}$ or $\frac{2}{4}$ by 2 = ■■ ■■ ■■ $\frac{6}{24}$ or $\frac{3}{12}$ or $\frac{1}{4}$.

An endless variety of exercises, on the above principle, may be given.

Proportion.

To teach the proportion that one number bears to another, the cubes are invaluable as a means of instruction.

■ ■■ ■■■ ■■■ ■■■

If 1 boy has 2 hands, 3 boys have 6 hands.

6 is as much greater than 3 as 2 is greater than 1.

■■ is to ■■■ as ■■■■ is to ■■■■■■

2 : 3 :: 4 : 6

■■■ is to ■■ ■■ as ■■■ ■■■ is to ■■■■ ■■■■

3 : 4 :: 6 : 8

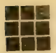
If 1 boy has 8 cubes how many cubes have 6 boys?—1 is to 8 as 6 is to 48.

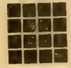
Squares.

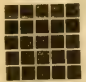
Let the whole class unite and form squares of any number of cubes,—1, 4, 9, 16, 25, 36. Then march and sing, having counted the number of cubes in one side of each square.

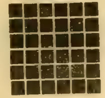
The square of 1 ■ is 1. The square root of 1 is 1.

The square of 2 ■■ ■■ is 4. The square root of 4 is 2.

The square of 3  is 9. The square root of 9 is 3.

The square of 4  is 16. The square root of 16 is 4.

The square of 5  is 25. The square root of 25 is 5.

The square of 6  is 36. The square root of 36 is 6.

To know the contents of each square, let the children multiply each side by itself,—thus,

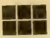
1 multiplied by 1 equals 1
2 multiplied by 2 equals 4
3 multiplied by 3 equals 9
4 multiplied by 4 equals 16
5 multiplied by 5 equals 25
6 multiplied by 6 equals 36

Rectangles.

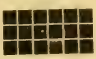
Rectangles have parallel sides and right angles the same as squares, but the sides are not equal. To ascertain their contents we multiply the long side by the short one:—

2 × 1 = 2

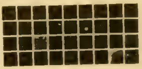
3 × 1 = 3



2 × 3 = 6



6 × 3 = 18

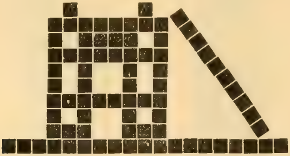


9 × 4 = 36

Cubes.

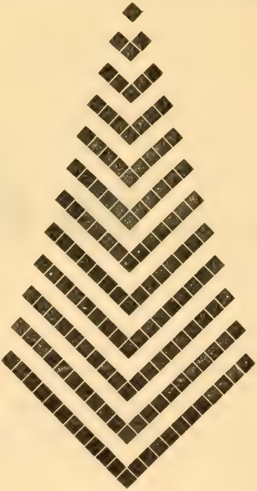
A cube has 6 equal square faces. A cube of 8 parts contains two squares of four placed upon each other;—it has two cubes every way;—to know its contents we say, 2 × 2 = 4 × 2 = 8. A cube of 3 has 3 × 3 = 9 × 3 = 27. A cube of 4 has 4 × 4 = 16 × 4 = 64. A cube of 5 has 5 × 5 = 25 × 5 = 125.

Let us build a house having the front 8 cubes square and make a pathway at the end 6 cubes in breadth. Now see how many cubes long a ladder must be to reach across the road to the top of the house. I could tell you how long it ought to be without measuring it. The house and the road form a right angled triangle. The square of the house 8 × 8 is 64. The square of the breadth of the road is $6 \times 6 = 36$. 64 and 36 are 100. One side of a square formed of 100 cubes will contain 10 cubes,—the length of a ladder that will reach across the road to the top of the house.



Let the children form a large square of 144 cubes, and beginning at one corner, separate them as in the following diagrams, forming squares in the following order, and repeating,—

The square of	The square root of
1 is 1	1 is 1
2 is 4	4 is 2
3 is 9	9 is 3
4 is 16	16 is 4
5 is 25	25 is 5
6 is 36	36 is 6
7 is 49	49 is 7
8 is 64	64 is 8
9 is 81	81 is 9
10 is 100	100 is 10
11 is 121	121 is 11
12 is 144	144 is 12



They will thus learn that the odd numbers 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, added together, form the square numbers 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 144.

They may be further taught, that the same order exists in the formation of cubes, —that 1 is the cube of 1, that 3 and 5 are 8 the cube of 2, that $7 + 9 + 11 = 27$ the cube of 3, that $13 + 15 + 17 + 19 = 64$ the cube of 4, that $21 + 23 + 25 + 27 + 29 = 125$ the cube of 5.

In this way the fundamental principles of mathematics may be taught before the mind is prepared to understand abstract rules.

Building in Union.

While it is the duty of parents and educators to develope freely the individuality of their children, they must not lose sight of the fact, that man is a social being and cannot be properly educated without the assistance and co-operation of his fellow-beings.

This mutual influence is exercised by communion far more than by mere words, and kindly feelings are educed in children far more successfully in common play and properly directed action, than by moral precepts alone.

To promote this in the Kinder Garten we allow children to build in union.

This is generally done at the end of a lesson: for example—I. Little John is required to build a railway arch; little James to build another. Fanny and Edwin and Frederick to unite their cubes and form a train, to pass under the arch.

During this a very interesting conversation may take place. Questions such as the following may be asked:—Who ever saw a railway arch? Of what use are such arches? Who has travelled by railway? What is the difference between the railway, the coach, and the wagon.

What advantage do we derive from railways? On this point much useful information may be given. The children may be taught that before railways were invented people could not visit each other so often, if they lived at a great distance from each other; letters could not be sent so quickly; different kinds of food and clothing, and articles of general use, could not be supplied so readily as they can now.

The dangers of travelling by railway if people are not careful, may be impressed on their minds, and the laws of compound motion made familiar to them.

Market Place.

II. Let us unite and build a market place, with shops and booths for different kinds of merchandize, a cross in the centre with steps, where the dairyman may sell his butter and eggs, stands for the horses, pens for the sheep, and an inn for the accommodation of visitors; models of fruit, as made by themselves, may be placed in the different shops.

Allow the children full liberty to express their ideas about the different kinds of produce, their qualities and uses. Ask them where the fish, the poultry, the sheep, the oxen, the horses, and asses come from. Where the potatoes, turnips, carrots, onions, radishes, cabbages, cauliflowers, apples, pears, &c., are obtained? Where the oranges, lemons, figs, apricots, pine-apples, cocoa-nuts, raisins, currants, &c., are produced? How the various toys, dolls, drums, trumpets, &c., are obtained.

True they cannot answer these questions, but the very fact of causing them to know their inability, at such a time, prepares their minds for the reception of knowledge, and gives an opportunity to the teacher to give most useful instruction in practical geography, &c.

With this game the difference between natural and artificial products may be successfully taught, and many pleasing lessons in social economy may be given without burdening the memory with words, which ought never to be used but to express ideas.

Bridge.

III. Let them unite to erect a bridge,—say London Bridge. The arches must be strong, to support a great weight, and firm enough to resist the action of the water. Little boats and steamers may be made to pass under the bridge, and an endless variety of valuable lessons given to the children. When all the energies of their minds are fixed upon the subject, the teacher may ask, Where does the water of the river come from? Where does it go? Why does it not go some other way? What do we call the bed of the river, the banks, the source, the course, the mouth, &c.?

Why are boats sometimes upset in the river? On this subject many useful lessons may be given.

Zoological Gardens.

IV. The teacher may ask, Who has ever visited the Zoological Gardens? What have you seen? One will remember one thing, one another, and so on. After each has mentioned that which produced the strongest impression, then let the whole classs unite and represent the Garden.

Little John saw the monkeys, let him build the monkey-house. Charles saw the hippopotamus, he can make a place for the great animal to bathe in. Richard saw the lions, tigers, and leopards; he may build dens for them. Emily saw the pretty giraffes, with their long necks; she may build a lofty house where they can stand with ease. Frederick saw the bears climb the long pole, and he may build a place for them.

In this manner a pleasing lesson in natural history may be given. All being allowed in turn to express their ideas, the teacher will have an opportunity to correct errors and give additional information.

Drawing-Room.

V. They may be allowed to make the interior of a drawing-room,—with chairs, tables, sofa, &c. Three or four may unite to build a piano; while thus employed, many little stories may be told. When the room is finished, the teacher may say, Now let mamma sit down at the piano and play and sing. What shall she sing? Must it be a merry song or a melancholy song? I once heard mamma sing a song about a poor little boy,—he was very poor, he had no shoes, no stockings, his father and mother were dead, no one cared for him; to obtain food he had to beg, and take all the money he got to a cruel master, who beat him, and did not send him to school or to the Kinder Garten, where he could play and learn. Once he had no food in the evening, no food in the morning, and he could not walk quickly, and when he was crossing the road, a carriage ran over him and he was killed. Poor little boy! had he been cared for he might have been strong, and good, and happy. All little children should be cared for, and taught something useful, that they need not beg. There is a good time coming, when there shall be no beggars, but all shall do something useful, and be merry and glad.

A variety of stories, according to the age and circumstances of the children, can be given from time to time, calculated to awaken tender, kindly, noble feelings, a love for the beautiful, and a desire to be good and useful.

Square.

VI. Let us build a square with houses for people to live in, and a beautiful place for children to play in.

There are many squares in London and other large cities and towns, which we will name children's gardens. In the centre we will place tables for little children to build upon, when they have played at the fishes, the pigeon-house, the cuckoo, and other games on the grass-plot. What kind of trees must we have round the square? Maple, beach, chesnut, &c. What kind of flowers must we produce? Roses, pinks, stocks, &c. We must not pluck the flowers, but look at them; we must not tread upon them, we have plenty of room to play without treading upon the flower beds.

Library.

VII. Let us build a library, where little boys and girls can read when they have learned to read. We must make shelves to put the books on. We shall want a shelf for little books about birds and beasts and fishes and insects; another for little books about trees and shrubs and flowers; another for little books about good little children who loved each other, and tried to make all people good and happy;

and many other shelves for books which tell how to make useful things and pretty things. And we must have long tables and seats, where we can sit and read and learn.

By this game a desire for learning may be aroused, which being done, the work of the teacher becomes pleasant.

Where children are thus trained to work in harmony and union, a direction is given to their minds which will determine their future career.

While individual action educes their creative powers, developes their faculties, and gives them confidence and self-reliance, united action developes their characters as social beings,—as collective individuals, who have enjoyments and interests in common with each other, and all mankind.

FIFTH GIFT.

This Gift is an extension of the Third; the cube is divided into twenty-seven equal cubes,—three of these are further divided into halves, and three into quarters.

Its peculiarity consists in the increased number of parts, by which more extended operations can be carried on; and the introduction of triangular forms, by which new forms of beauty can be produced, a greater variety of buildings, articles of furniture, &c., can be constructed, and more advanced exercises in number and form given.

It is specially adapted for older children, who have mastered the previous Gifts, though at the same time it abounds with attractions for the younger.

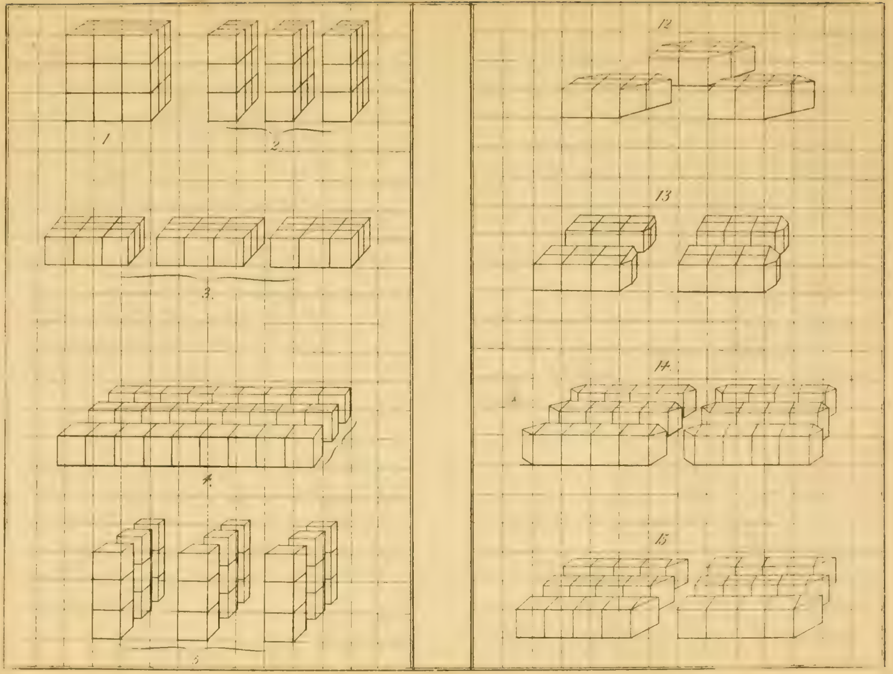
This is the first time that the child has met with the triangle; he may have seen it, but till now he has not become intimately acquainted with it.

He finds it of great use;—by its aid he can produce new results, can dispense with sharp corners, give roofs to his houses, construct ground forms for his buildings, and perform many wonderful feats.

So long as he is allowed free exercise, he supplies all his buildings with triangular roofs; in short, so fond is he of his new play-fellow, that designs are made for its express accommodation, and buildings erected simply for its convenience.

All the lessons given under the Third Gift may be repeated with this, leaving the children to discover the increased power which the additional playthings give them.

After they have exhausted all their own resources, the teacher takes her own box, and, commencing with Plate XXIX., constructs the ground form, or lays the foundation of her building in accordance with the plan given: the children follow her example; this done, she examines every ground form to see that all are correct.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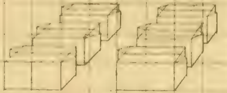

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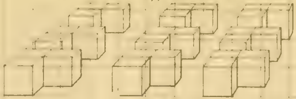

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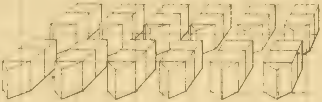

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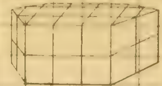

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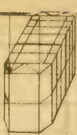

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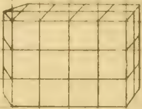

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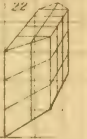

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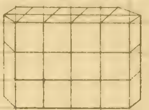

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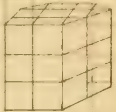

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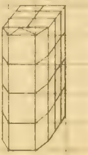

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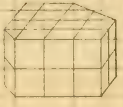
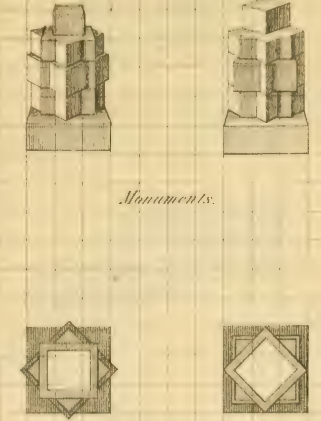
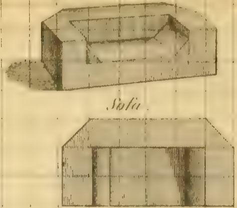


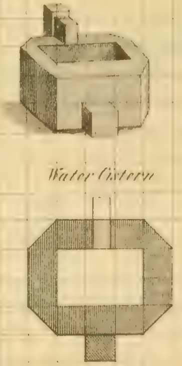
FIFTH GIFT,
Plate XXVIII.



Monuments.

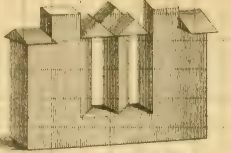


Sofa.

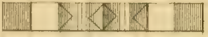


Water Cistern.

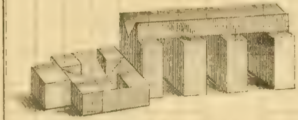
FIFTH GIFT.
Plate XXIX.



Gothic Window

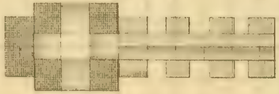


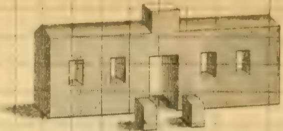
Ground Plan



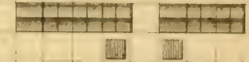
Gothic Aqueduct

Ground Plan

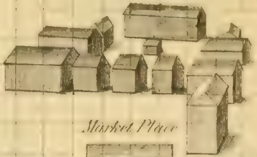




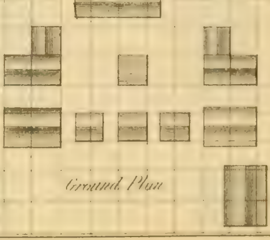
Summer Box



Ground Plan



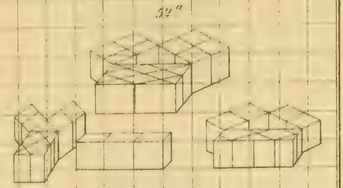
Market Place



Ground Plan

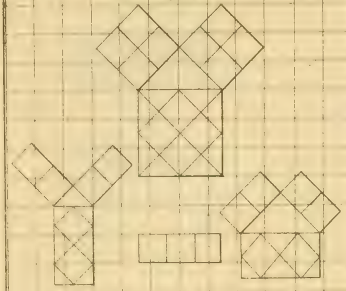
FIFTH GIFT,
Plate XXX.

52^a



Perspective.

52^b



Ground Plan

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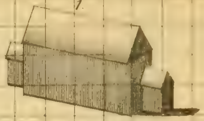
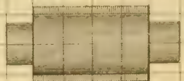
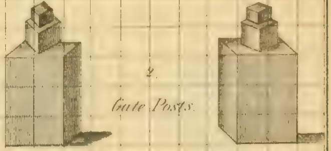


Country Box.

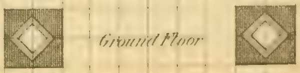


Ground Floor.



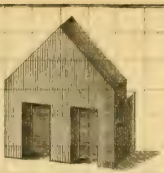
2.

Gate Posts.

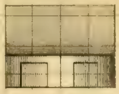


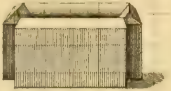
Ground Floor

FIFTH GIFT,
Plate XXXI.

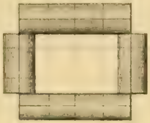


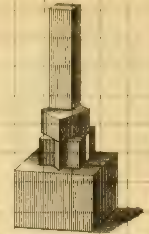
Guard House.





Workshop





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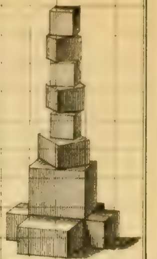
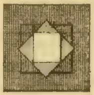
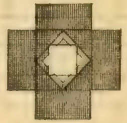


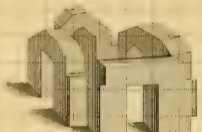
Column of Honour.



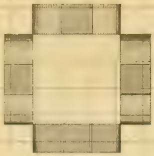


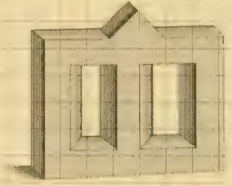
FIFTH GIFT

Plate XXXII.

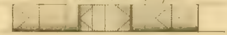


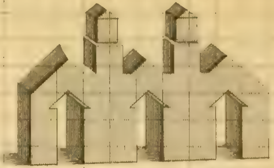
Castle Yard



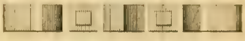


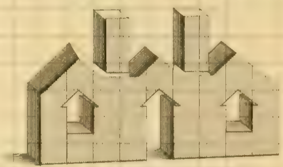
Gable end of a Chapel



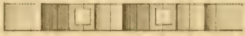


Three Doors.





Door and two Windows



FIFTH GIFT,
Plate XXXIII.

Forms of Stars

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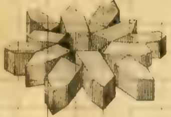

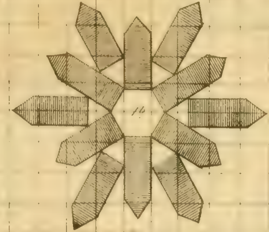

1b

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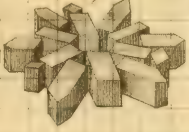
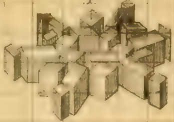
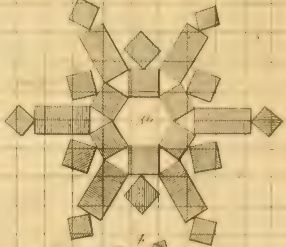


Forms of Stars.

3a





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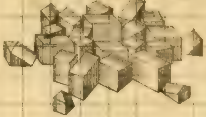

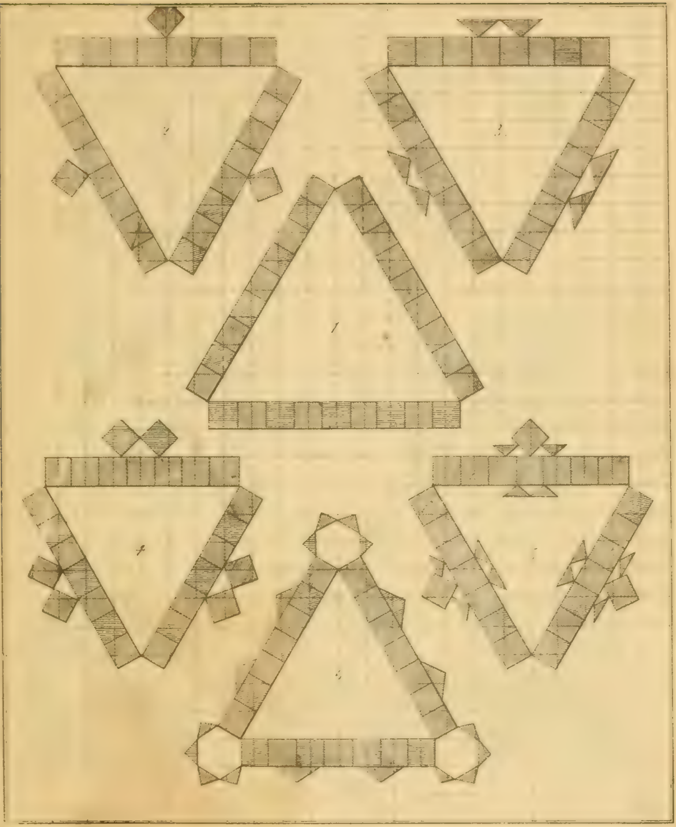

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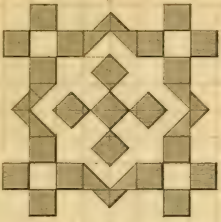

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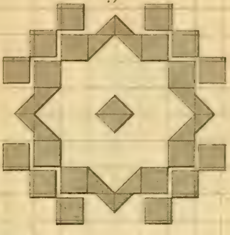

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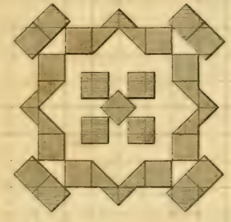

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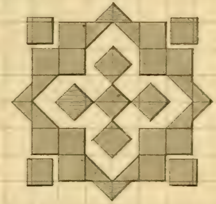

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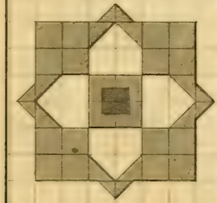

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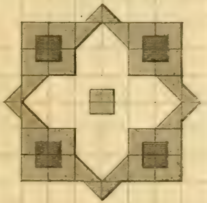

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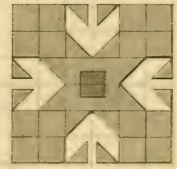

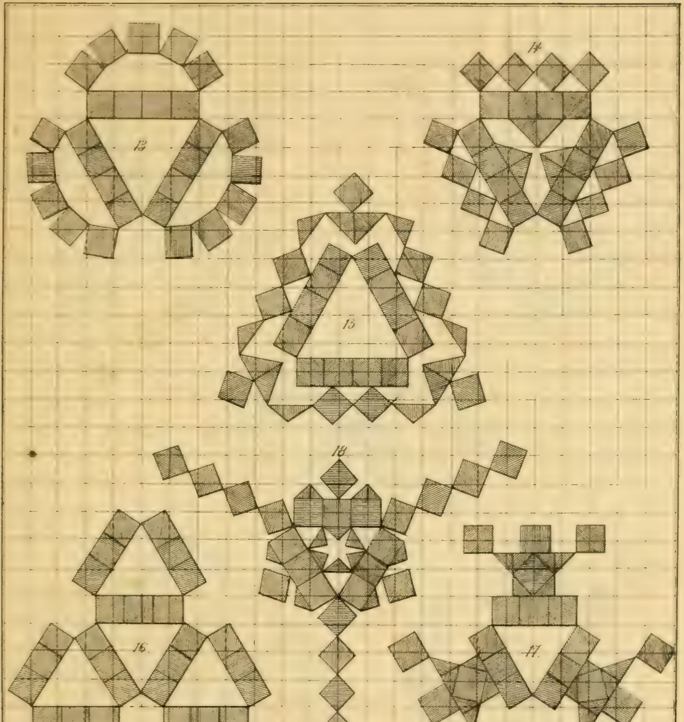
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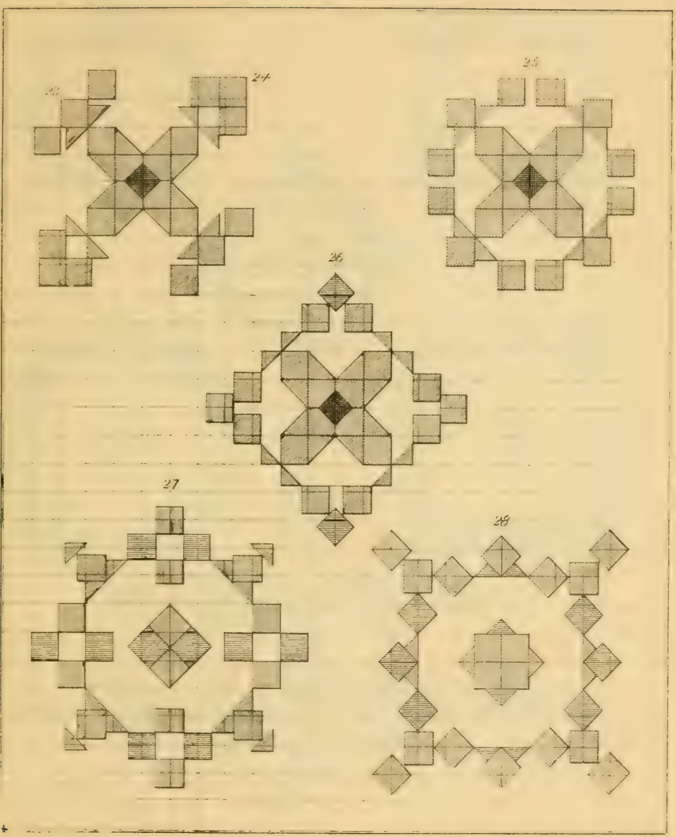

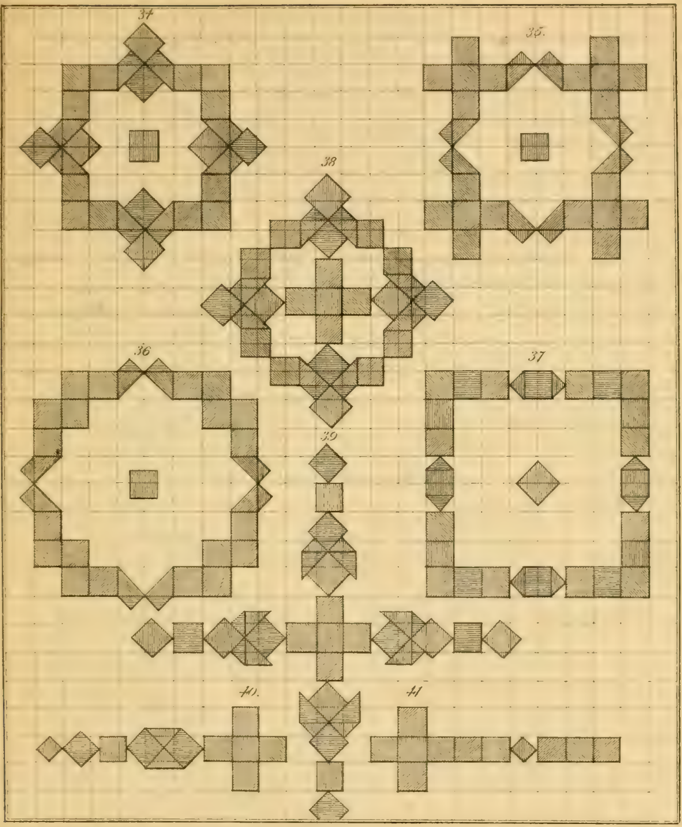
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The foundations being properly laid, she proceeds to raise her structure, during which time she makes such observations, relative to the form, size, number of cubes required, &c., as she may deem advisable. The building being finished, and all being satisfied as to the correctness of each structure, any pleasing tale that may occur to the mind of the teacher, having a connection with the building, may be conveniently told; or the children may be induced to make their own observations.

One new building is sufficient for one lesson: if there be any time for further exercise, let them gradually take down the structure, and again direct their attention to the foundation.

Where it is deemed desirable to adapt the Gift to the still further development of the children, the following course may be adopted:—

All the parts are put into the box,—the smallest parts upwards,—the box is closed, and a conversation, similar to the following, takes place: the teacher using every means in her power, by pointing at parts referred to, or changing the forms of her questions to enable the child to understand what she desires.

Teacher. In what does your box resemble the other boxes you have had?

Child. It has the same number of faces,—six,—the same number of edges,—twelve,—the same number of corners,—eight.

T. Are the faces of the same kind?

C. All the faces are plane,—each is bounded by four straight lines of equal length,—which unite in points, and form four plane right angles.

T. What difference is there between this box and the others?

C. It is larger.

T. In how many directions is it larger?

C. In three,—length, breadth, thickness.

T. Can you give me other words instead of breadth and thickness?

C. Width and depth.

T. Take off the lid, and tell me in what the contents resemble the former Gifts.

C. [*Takes off the lid.*] There are cubes lying side by side, also upon each other,—they form a complete square.

T. In what do they differ from the Third Gift?

C. They are more in number,—twice the number, three times the number,—more than three times.

T. Is there any other difference?

C. Three of them are divided into halves, and three into quarters.

T. Examine one of the halves, and tell what you observe.

C. It has five plane faces, nine edges, and six corners.

T. What form are the faces?

C. Three of the faces have four sides,—two of them have only three sides,—each four-sided face is bounded by four lines, which form four right angles. Each three-sided face is bounded by three lines,—one long and two short,—which meet in three points; in one point a right angle is formed, in two points are angles not so large as right angles—these are called acute angles.

T. Is there any other difference?

C. Two of the four-sided faces are equal squares; the third, and longest, is a rectangle, but not a square

T. Examine one of the quarters, and compare it with one of the halves. What do you observe?

C. It has the same number of plane faces, edges, and corners; the same number of lines, right angles, and acute angles.

T. Is there any difference?

C. It is only half the size. It has only one square face, and that is the largest. The other had two square faces, each of the same size. Two of the faces are rectangles; the other had only one rectangle. The long side of the triangle is equal to one of the short sides of the other triangle, and one of its short sides is exactly equal to one half of the long side of the other triangle.

T. Unite two of the halves in such a way that the two largest faces shall meet together. What do you observe?

C. A perfect cube.

T. Unite two of the square faces, so that they will form a figure like the roof of a house. Examine it.

C. There are three four-sided faces, they are all rectangles, not squares; two triangular faces,—two of the angles are acute angles, one is an obtuse angle.

T. Turn one of the halves completely round, allowing the same faces to be still united. What do you now observe?

C. A solid having six plane faces, twelve edges, and eight corners: two faces are squares, two rectangles; and two parallelograms, having each two acute angles, and two obtuse angles.

T. Unite two of the quarters in a similar manner, that the largest faces shall meet each other.

C. I have formed a prism, having two faces square and four rectangular: it is called a parallelopiped.

T. Unite them so as to form a solid, resembling one of the halves.

C. It is like it in every way.

T. Turn one of the quarters round, as you did one of the halves. Now what have you?

C. A solid of the same shape as that produced by the two halves, but in this case the squares are the largest faces.

T. Unite all four, so as to produce a similar form, by bringing the square faces together. Unite two other faces, and still produce a similar form.

Form two parallelopipeds.

With two other quarters form a solid having seven sides. Describe it.

C. It has seven plane faces,—five four-sided faces, two five-sided faces. The four-sided faces have all the angles right angles, two are squares; each of the five-sided faces has two right angles, two obtuse angles, and one acute angle.

T. With the six quarters form a solid, having eight plane faces. Describe it.

C. It has six four-sided faces,—two of them are squares, four are rectangles: it has two six-sided faces,—each of the six-sided faces has two right angles and four obtuse angles. In the whole solid are eight faces, eighteen edges, twelve corners.

A similar course may be adopted with different combinations.

The following suggestions may assist the teacher to others of greater variety:—

1. Form a square of nine: let each corner cube be divided into halves, and the central one into quarters.

2. Divide the square into two equal right-angled isosceles triangles.

3. Divide each of the triangles into two equal right-angled isosceles triangles, making four triangles in all.

4. Unite the bases of the triangles so as to produce two squares.

5. Unite the two squares so as to form a rectangle, having its sides double the length of the ends.

6. Take one-fourth of the rectangle from one end and unite it to the other so as to form a rhomboid, having its sides double the length of its ends.

7. Divide the rhomboid into two equal rhomboids.

8. Unite the two rhomboids, so as to form one rhomboid, the sides of which shall be four times the length of the ends.

9. Divide the rhomboid into four equal triangles.

10. Unite them into two equal shares, and place them one upon another, forming a square prism. Describe it: state how many square faces; how many rectangular faces, &c.

11. Divide the square prism into two equal triangular prisms, and describe its faces.

12. Take away four pieces, and unite the remainder into a six-sided prism, having two six-sided faces and four rectangular faces, eighteen edges, twelve corners.

13. Divide this solid into two equal four-sided prisms, each having two square faces and four rectangular faces; and four triangular prisms, each having two triangular faces and three rectangular faces.

14. Unite the prisms so as to form two rhomboidal prisms, each having two faces rhomboids, two squares, and two rectangles.

15. Unite the two prisms into one, having the same form.

16. With ten pieces form a five-sided prism, having two five-sided faces and three rectangular faces, fifteen edges, and ten corners.

17. Divide them into five triangular prisms.

18. Unite them so as to form three prisms,—one triangular prism, one rhomboidal prism, one square prism.

19. Form an octagon of twenty-four triangular pieces.

20. Divide it into four rhomboids, one square, and four triangles.

21. Unite again, and remove two parts so as to leave two equal hexagons.

22. Place one upon the other, forming a hexagonal prism.

23. Remove two parts, so as to leave two square prisms.

24. Unite the parts removed, so as to form a square prism, &c.

An endless variety of pleasing instructive exercises, calculated to develope form, number, and order, may be thus given whenever required, and by a glance at any of the combinations given in the Plates an ingenious teacher will never be in want of a different starting point.

LESSONS ON NUMBER.

1. Allow the child to count halves, $\frac{1}{2}$, 1, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3 ; and then return, 3, $2\frac{1}{2}$, 2, $1\frac{1}{2}$, 1, $\frac{1}{2}$.

2. Pursue a similar course with the twelve quarters, thus— $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$, $1\frac{1}{2}$, $1\frac{3}{4}$, 2, $2\frac{1}{4}$, $2\frac{1}{2}$, $2\frac{3}{4}$, 3; then return.

3. Place alternately one half and one quarter, count again,—$\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{4}$, $1\frac{1}{2}$, $1\frac{3}{4}$, $2\frac{1}{4}$, $2\frac{1}{2}$, 3, $3\frac{1}{4}$, $3\frac{3}{4}$, 4, $4\frac{1}{2}$; then return.

4. Let the child take six cubes, and having placed the six halves upon them, begin to count, $1\frac{1}{2}$, 3, $4\frac{1}{2}$, 6, $7\frac{1}{2}$, 9 ; and return, 9, $7\frac{1}{2}$, 6, $4\frac{1}{2}$, 3, $1\frac{1}{2}$.

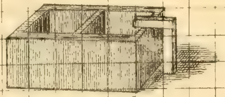
5. Take twelve cubes; upon each place one quarter, and count, $1\frac{1}{4}$, $2\frac{1}{2}$, $3\frac{3}{4}$, 5, $6\frac{1}{4}$, $7\frac{1}{2}$, $8\frac{3}{4}$, 10; descend in a similar manner as before.

6. Add half to each of the above, and then count, $1\frac{3}{4}$, $3\frac{1}{2}$, $5\frac{1}{4}$, 7, $8\frac{3}{4}$, $10\frac{1}{2}$; descend as before.

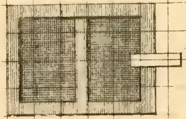
7. Take twelve cubes; to the first add one half, to the second one quarter, and so on alternately. Then cause the child to count, $1\frac{1}{2}$, $2\frac{3}{4}$, $4\frac{1}{4}$, $5\frac{1}{2}$, 7, $8\frac{1}{4}$, $9\frac{3}{4}$, 11; descending as before.

8. Arrange the cubes and their parts promiscuously and cause the child to add the various parts: for example, $2\frac{1}{4} + 1\frac{1}{4} + \frac{1}{2} + 2\frac{1}{2} + 1\frac{1}{4} + 2\frac{1}{2} + 1\frac{3}{4} = 12$. Of course such an arrangement as the above would not be the first.

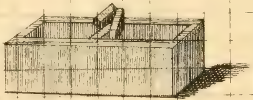
Plate XXXIX.



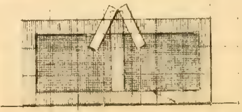
Divided Well.



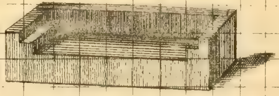
View from above



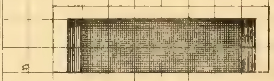
Double Well with outlets



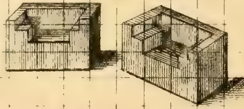
View from above



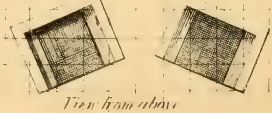
Sofa with Pillows



View from above

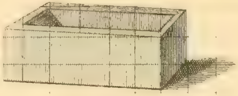


Two Arm Chairs

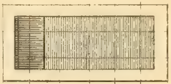


View from above

SIXTH GIFT,
Plate XI.

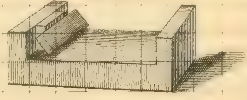


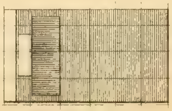
Shut up Bed.



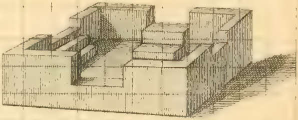
View from above

Bed with Mattrass



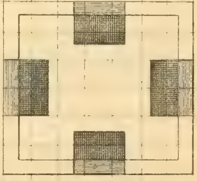


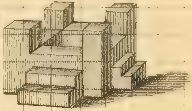
View from above.



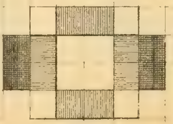
Bath.

View from above



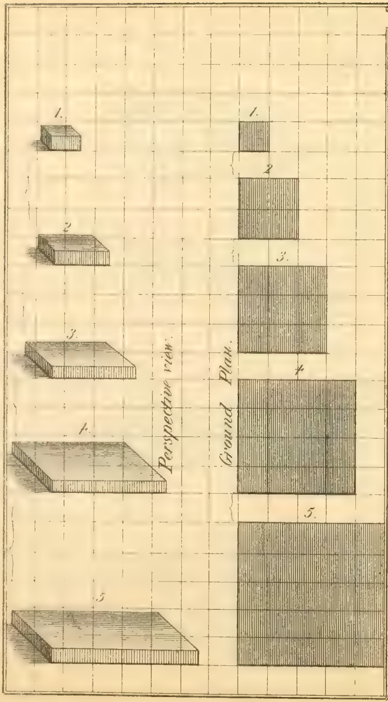


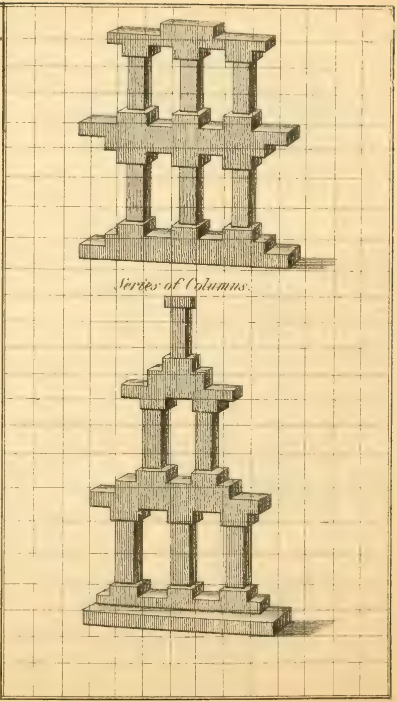
Well



View from above

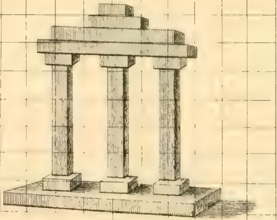
SIXTH GIFT,
Plate XLI.



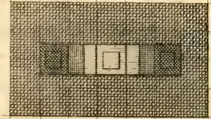


Series of Columns.

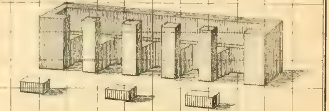
SIXTH GIFT,
Plate XLII.



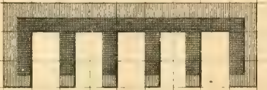
Monument of three friends.



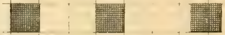
Ground Plan.



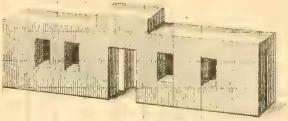
Stable and Mangers.



Ground Plan.

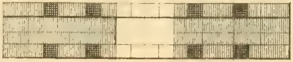


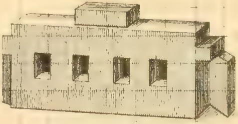
SIXTH GIFT,
Plate XLIII.



Covered Garden house without door.

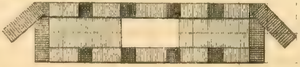
Ground Plan

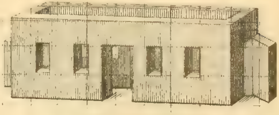




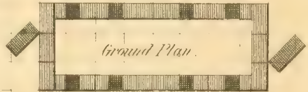
Covered Garden house with door.

Ground Plan.

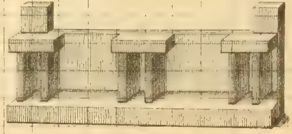




Open Garden house.

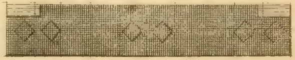


Ground Plan.

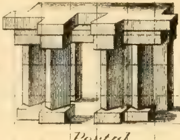


Colonnade

Ground Plan

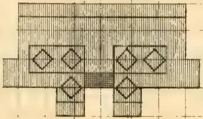


SIXTH GIFT,
Plate XLIV.

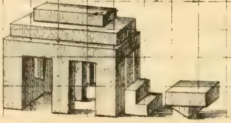


Portal.

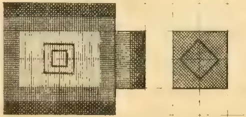
Ground Plan.

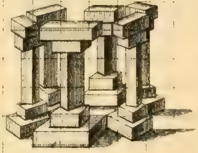


Garden hall with Seat & Table.



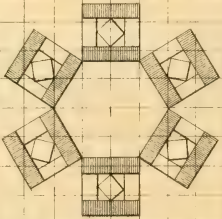
Ground Plan





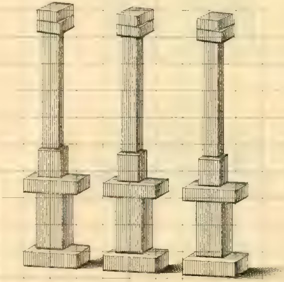
Columns of Concord.

Ground Plan.

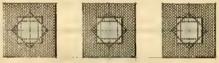


SIXTH GIFT

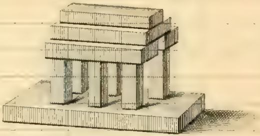
Plate XLV.



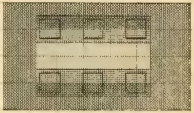
Monument of the three Heroes



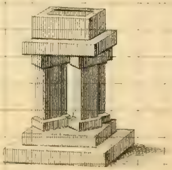
View from above.



Hall.

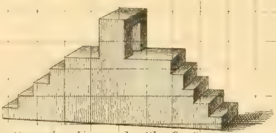


View from above.

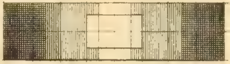


Font.

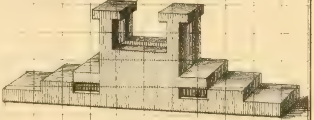
SIXTH GIFT,
Plate XLVI.



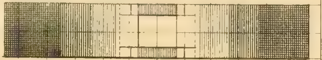
Steps leading to the Shaft of a mine



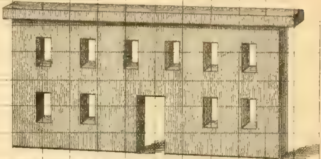
View from above



Observatory

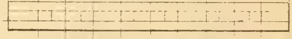


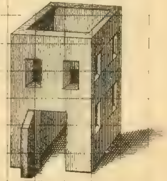
View from above.



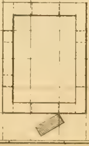
Front of a House with 2 Stories

View from above.



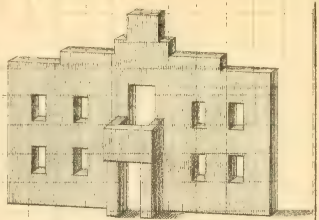


Two Story House

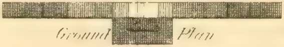


View from above.

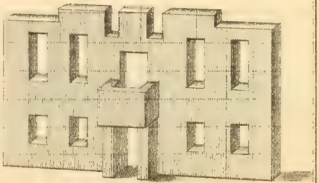
SIXTH GIFT,
Plate **XLVII.**



Two story Front and Balcony.

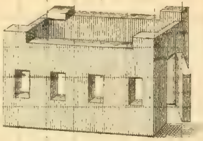


Ground Plan

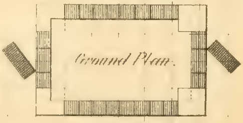


Two Story Front with Balcony.

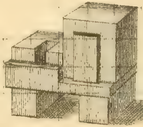
Ground Plan



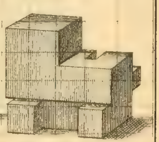
House without Roof.



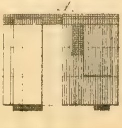
Ground Plan.



Cooking Place A.

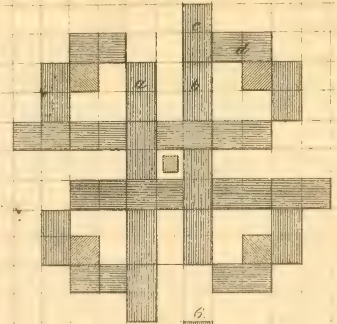


Fire Place B.



Ground Plan A. B

5.



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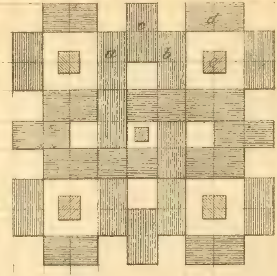

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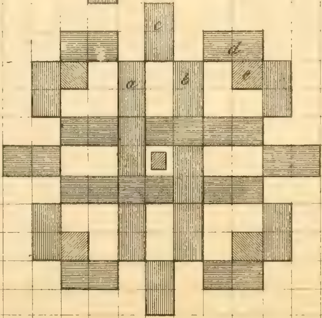

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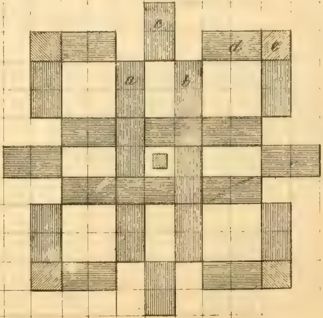

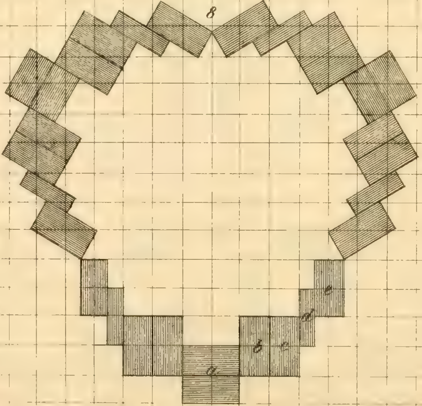
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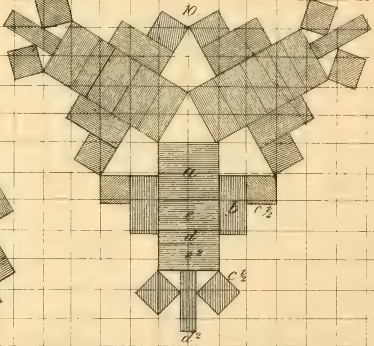
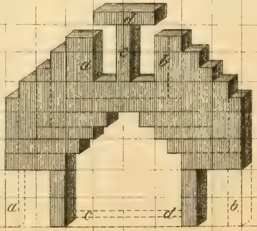

10.


9.

Multiplication and Division.

Let each child demonstrate as he repeats,—

$\frac{1}{4} \times 2 = \frac{1}{2}$, $\frac{1}{2}$ of $2 = \frac{1}{4}$. $\frac{1}{2} \times 2 = \frac{2}{2} = 1$. $\frac{3}{4} \times 2 = \frac{6}{4} = 1\frac{1}{2}$.
$\frac{1}{4} \times 3 = \frac{3}{4}$, $\frac{1}{4}$ of $3 = \frac{3}{4}$. $\frac{1}{2} \times 3 = \frac{3}{2} = 1\frac{1}{2}$. $\frac{3}{4} \times 3 = \frac{9}{4} = 2\frac{1}{4}$.
$\frac{1}{4} \times 4 = \frac{4}{4}$, or 1, $\frac{1}{4}$ of $4 = 1$, $\frac{1}{2} \times 4 = \frac{4}{2} = 2$. $\frac{3}{4} \times 4 = \frac{12}{4} = 3$.
&c. &c. &c.

$1\frac{1}{4} \times 2 = 2\frac{1}{2}$. $1\frac{1}{2} \times 2 = 3$. $1\frac{3}{4} \times 2 = 3\frac{1}{2}$.
$1\frac{1}{4} \times 3 = 3\frac{3}{4}$. $1\frac{1}{2} \times 3 = 4\frac{1}{2}$. $1\frac{3}{4} \times 3 = 5\frac{1}{4}$.
$1\frac{1}{4} \times 4 = 6$. $1\frac{1}{2} \times 4 = 6$. $1\frac{3}{4} \times 4 = 7$.
&c. &c. &c.

After the lessons of the Third Gift the above will be perfectly easy, and a great variety of similar lessons may be given, and each affirmation demonstrated by the child.

It must ever be borne in mind, that all the games of the Third Gift can be extended with this, and hence that any directions given must refer to those who have mastered the instructions given under that Gift.

SIXTH GIFT.

This Gift stands in the same relation to the Fourth as the Fifth stands to the Third, and by its aid all the exercises given under the Fourth may be carried out to a far greater extent. The box being the same in size as the Fifth, the teacher may conveniently adopt a similar course of exercises.

After the children have exhausted their own resources, and, by the aid of the teacher, mastered the various forms of beauty, of recognition, and of use, given in the Plates,—observing the rules given under the Fifth Gift relative to the foundations,—questions similar to the following may be asked :—

Q. In what does this box resemble the fifth box?

A. It has the same length, breadth, and depth ; the same number of faces, edges, and corners : the faces are all plane faces, and are bounded by straight lines, which all meet in points forming right angles :—it has six faces, twelve edges, eight corners, twenty-four right angles.

Q. Open your box, take out the cubes, look inside, and tell me what you observe. What does your box resemble?

A. It is like a well or a square bath; it is deep enough to hold three cubes placed upon each other, wide enough to hold three cubes placed beside each other, and broad enough to hold three times three, or nine: it encloses sufficient space to hold a solid cube three inches in length, breadth, and thickness, or twenty-seven solid inches. It would hold twenty-seven cubic inches of water, or any other substance.

Q. Examine the contents of your box. What do you observe?

A. There are thirty-six pieces;—eighteen of them are like the long cubes of the Fourth Gift, six of them have the same length and thickness, but only half the breadth, and twelve of them have the same breadth and thickness, but only half the length.

Q. You describe the cubes of the Fourth Gift, now describe the two playthings which you have met for the first time.

A. The long ones are square prisms, each having four rectangular faces; and two square faces: each of the rectangular faces is equal to four of the square faces. The short ones have also each two square faces and four rectangular faces; but each square face is equal to two of the rectangular faces. The long ones and the short ones are equal to each other; and one long one and one short one, though different in form, are together equal to one of the eighteen oblongs.

The children may now be required to build from dictation. Hitherto they have either followed the dictates of their own minds or imitated the designs of others.

For convenience of expression we will name the largest pieces A, the long halves B, and the short halves C.

Allow the children to measure each piece and express in words the result,—

A is two inches long, one inch broad, half an inch thick.

B two inches long, half an inch thick.

C half an inch thick, and one inch square.

1. With one B and one C erect a column two inches high upon a base one inch square and a half an inch thick.
2. With three of B form a door-way two inches high and one inch wide.
3. With two of A and two of B form a gate-way two inches square.
4. With four of A form a similar gate-way.
5. With four of A and two of C form a gate-way three inches high and two inches wide.
6. With four of A make a bath two inches long, one inch wide, one deep.
7. With four of A and four of B make a bath two inches long, one wide, one and a half deep.
8. With two of A and three of B make a table two and a half inches high and two inches square.
9. With five of A and two of C make two windows one inch wide and one and a half high.

10. With seven of A and three of B make the front of a cottage seven inches long, three inches high, with a door one inch wide and two inches high; and two windows each one inch square.

11. With eight of A, three of B, and six of C, make the front of a house seven inches long, four and a half high, with chimney half an inch above the roof; door two inches high and one wide; and five windows, each one inch square.

12. With eight of A, six of B, and ten of C, make the front of a warehouse with three stories, seven inches long and six inches high, having one door two inches high and one inch wide, and eight windows one inch square.

13. With eight of A, six of B, and eight of C. build the front of a hall with porch and balcony, six inches long and six and a half high, having an entrance three inches high and one inch wide, three windows two inches high and one wide, and two windows one inch square.

14. With seventeen of A and six of C make the interior of a stable, with door-way three inches high and one and a half wide, and four stalls for horses, each two inches high and one wide; supply each stall with a manger one inch square.

15. With five of A, three of B, and five of C, erect a butter-cross eight inches high, the first elevation half an inch high and three inches square; the second half an inch high and two inches square; the third half an inch high and one inch square; the fourth four inches high and half an inch square; the fifth half an inch high and one inch square; the sixth two inches high and half an inch square.

16. With fourteen of A, three of B, and seven of C, erect a monument ten and a half inches high; the first elevation four inches square and half an inch high; the second three inches square and half an inch high; the third two inches square and half an inch high; the pedestal three inches high and one inch square; the pillar six inches high and half an inch square. How many solid inches are required? Twenty.

17. With three of B enclose a triangular space half an inch deep.

18. With three of A and three of B enclose a triangular space one inch and a half deep.

19. With five of B enclose a pentagonal space.

20. With six of B enclose a hexagonal space.

An endless variety of dictation lessons may be given according to the peculiar genius of the teacher and the capacities of children.

Having mastered these six Gifts the children will be fully prepared to enter the school, where a complete course of instruction in the arts and sciences will be given. That exercises in the previous lessons may be given, as occasion requires, each child will be supplied with the Seventh Gift,—a box containing all the variety of forms supplied in the four previous Gifts.

The inventive and artistic powers of the children being thus far developed and exercised; their minds being stored with important facts, and their bodies having been duly exercised as well as their mental and moral faculties, the path of knowledge will, to them, have charms unknown to those who have been differently trained. What to others appear insurmountable difficulties will be to them but pleasant exercises.

BOX, CONTAINING PIECES OF BOARD OR PASTEBOARD CUT IN DIFFERENT FORMS,

TRIANGLES, QUADRANGLES, SEMICIRCLES.

With these an infinite variety of figures may be formed, representing articles of utility, forms of beauty, and every variety of geometrical figures.

This box is also used for the purpose of enabling the child to form letters of different kinds,

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z.

When children are able to form letters they are taught to unite them so as to form words.

Words.

Monosylables.

Each child is required to form the letter e; when formed, each is required to place b before it, making *be:* that word having been pronounced by all in unison, and by each separately, they are told to remove b and put h in its place, making the word *he:* repeat as before, then remove h and put m in its place, making the word *me:* repeat again, then remove the m and put w in its place, making the word *we.*

This having been done, exercise them still further by dictating first one word, then another, until the sounds and the forms of the words become so connected in the minds of all that they can be formed without hesitation.

The following examples may all be used in the same manner:—

ay—day, hay, jay, lay, may, nay, pay, say, way, play, stay, stray.
ee—bee, see, lee, flee, knee, tree.
ice—dice, mice, nice, rice, tice, vice, trice, spice.
ap—cap, gap, lap, map, nap, pap, rap, sap, tap, trap, strap.
ip—dip, hip, lip, nip, pip, rip, sip, tip, trip, chip, slip, strip, ship, whip.

ipe—pipe, ripe, wipe, snipe, tripe, stripe, gripe.

op—fop, hop, shop, lop, slop, mop, pop, rop, drop, sop, top, stop.

at—bat, cat, fat, gat, hat, lat, mat, nat, gnat, pat, rat, sat.

ag—bag, cag, lag, flag, nag, rag, wag, brag, stag, shag.

A similar course may be adopted with all words having the following terminations: —aid, ea, oy, ow, aw, ie, ey, ab, ape, eep, ib, ob, ope, ub, oop, ad, ade, at, ate, ed, eed, ard, ood, ut, ute, am, ame, an, ane, ain, and, unk, ant, aint, em, eam, en, ean, ent, end, un, une, in, ine, ind, ink, ove, um, oom, un, oon, ale, act, ill, eat, ell, elf, ile, ild, ole, old, ull, ool, it, an, all, ow, out, own, ound, ase, are, ark, air, eer, ear, ire, ore, ure, aff, ave, eave, ive, ove, uff, ask, ack, ake, eek, ick, ike, oke, uck, ook, ax, ix, ex, ue, as, ass, are, ase, ast, aste, est, ess, ust, aze, eeze, ang, ing, inge, ung, ance, ence, itch, atch, &c., &c.

These exercises may be varied by commencing with the name of some object with which all are familiar, *i.e.*, a ball, by changing the first letter the following words may be spelled,—call, fall, gall, hall, mall, pall, tall, stall, wall. They may now place s at the end of each, or of those which admit of it.

By this time the children will have learned to form letters and words upon their slates, and be prepared to receive lessons on simple objects, and form their names, qualities, and uses, upon the slate, as the teacher forms them on her black board.

As in every other case these lessons must commence with such objects as are well known, and care must be taken not to give a word until the child requires it to express an idea. The teacher may place a little child before the class, and ask some one to give a word appropriate. Suppose it be boy. She asks for the first letter: having obtained it, she requires each to write or print b. She examines each slate: after which she writes and prints b on the black board. Each having done the same on the slate, she requires the second letter, o: examines again; then the third, y. Having obtained all, she spells and pronounces the word *boy*, and all the children do the same collectively and individually.

In a similar manner she obtains words expressive of the different parts of the body, —head, hair, face, eyes, ears, nose, cheeks, chin, mouth, teeth, tongue, lips, &c.

All the children being able to spell and form the names of all the parts of the body, she pursues a similar course with the actions or uses of the boy and his various parts. She asks, What can this boy do? And she is soon informed that he can see, hear, smell, taste, feel, eat, drink, &c.

LAYING STICKS.

With a few sticks an endless variety of forms may be represented, as will be seen by the following examples:—

This game is in close connection with the other games already described. It is not an accidental or indifferent one, but a necessary result of the Kinder Garten idea.

Although connected with the others, it is distinct from them, and requires a higher degree of mental power than the former Gifts. The senses must be already much cultivated, especially the eyes and hands, in order to find the proportion of the distances; the child must have an idea of square, round, straight, right, left, horizontal, perpendicular, oblique, parallel, though he may not be able to define them.

Without a certain previous cultivation, the sticks will give no pleasure to the child, but their use will increase and exercise the creative power when the first three Gifts have been mastered.

It is more difficult for a child to represent a chair with sticks than with cubes, because it has to measure with the eye the whole distance from one stick to another, while the cube fills up the space.

A child came to our Children's Garden in London, on a visit with her guardian, and was invited to join in the game of sticks; immediately her whole mind was so occupied, that she not only felt at once quite at home, but could not resist expressing her delight in audible sounds: the reason was, that the material given was just what was required in her stage of development to enable her to express ideas, which at the time were struggling to be expressed.

In its form the stick has a definite relation to the other games, for as the cylinder is contained in the ball, and the cube in the cylinder, so is the stick contained in the cube, —it is simply one edge of the cube separated from it.

In itself the stick is a real embodied line, the representative of all that is straight. If it be asked, Of what use are those games with the sticks? we answer, They introduce the child into the different occupations and departments of life, they increase the knowledge of variety, lead from the visible to the invisible, exercise steadiness, are a means of uniting, they exercise the faculties generally, and teach that out of the simplest materials can be produced what is useful, beautiful, and instructive. It is here presumed that the teacher, or children's gardener, whose employment it is to cultivate the young mind, has embraced the whole subject, and realized the good and the beautiful in her own life.

The sticks are in general bound in tens, that the children may become familiar with the decimal idea.

STICKWORK

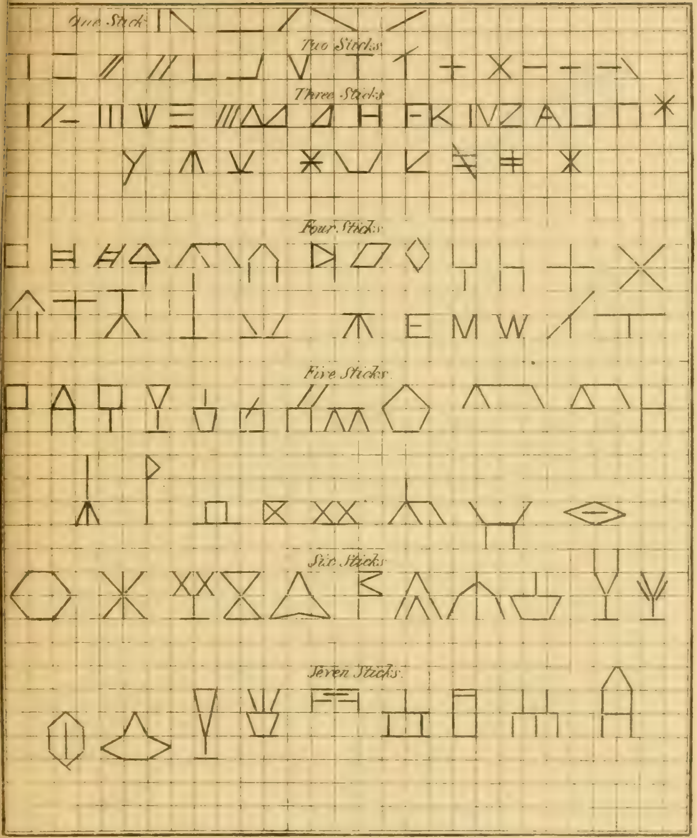

One Stick
Two Sticks
Three Sticks
Four Sticks
Five Sticks
Six Sticks
Seven Sticks

Plate LI.

STICKWORK.

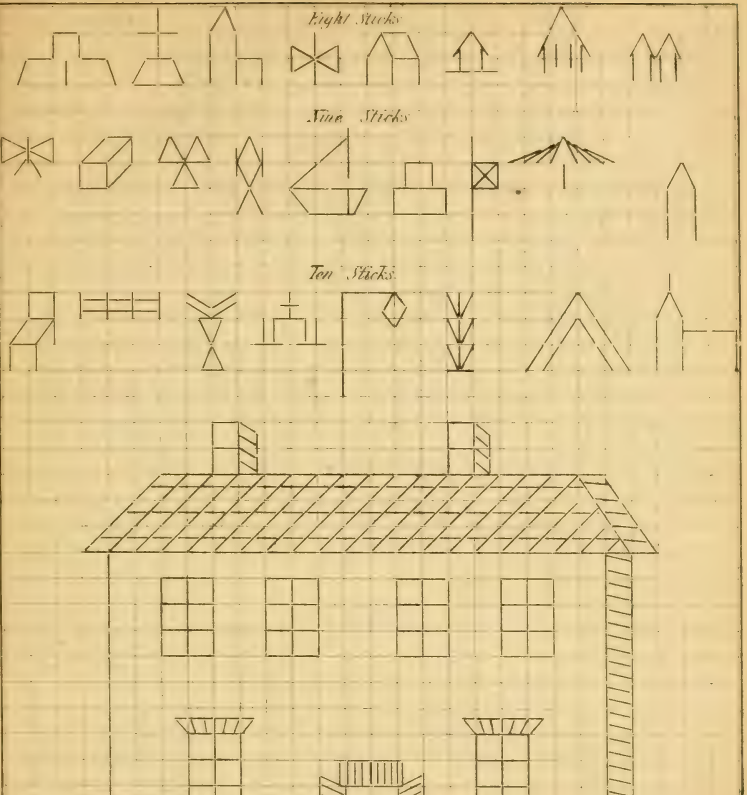


Plate LII.

STICKWORK.

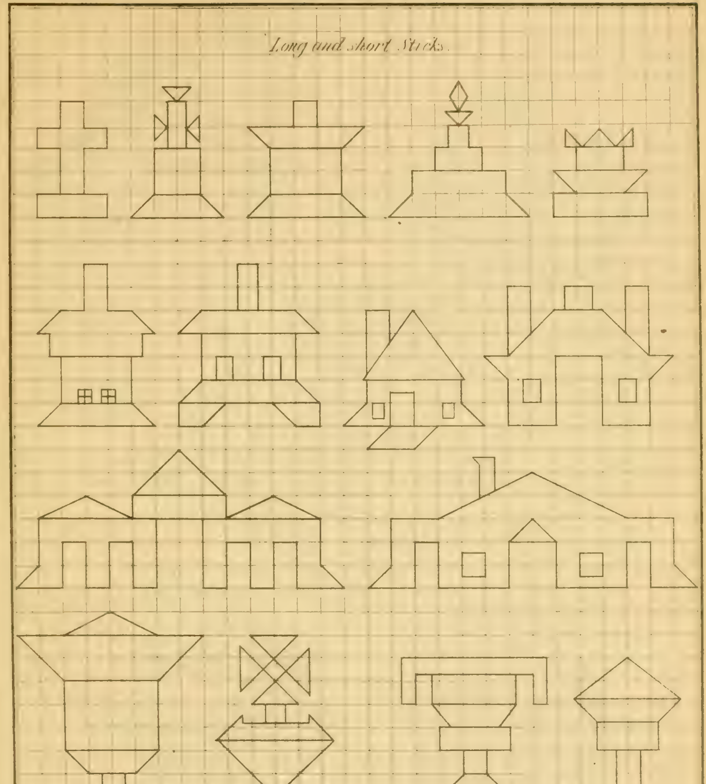
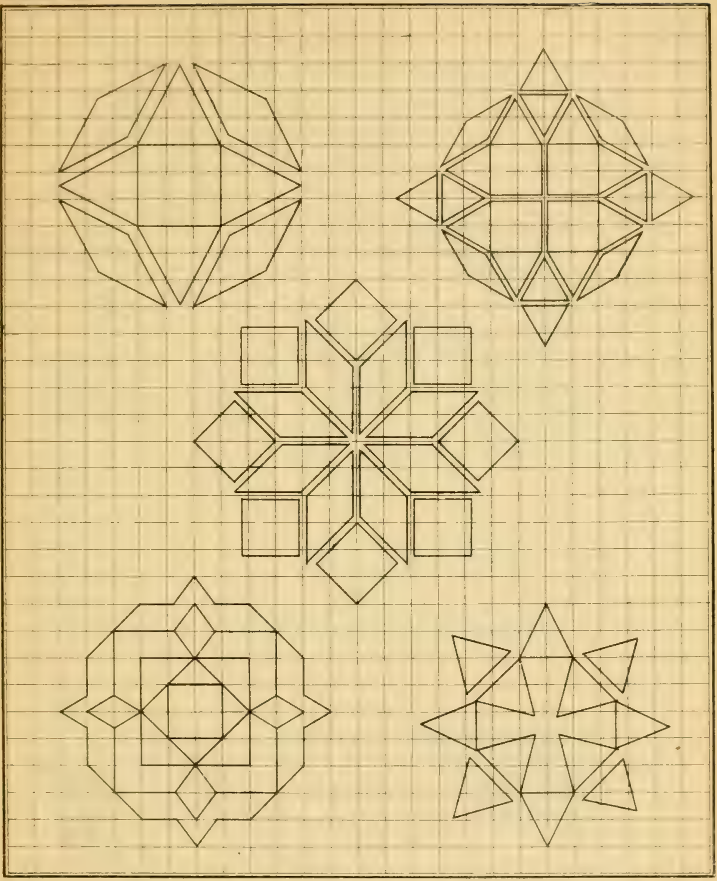


Plate LIII.

STICKWORK.



1. The teacher gives out one stick to each; requires each to take it in the right hand, pass it to the left, hold it up, lay it down, let it rest on one end, lift it up and allow it to fall upon the table so as to produce sound, at the same time singing a few words as, Look! my stick is falling, Hark! it makes a noise.

After a few preparatory movements, according to the fancy of the teacher, she asks, What does the stick represent? Each child will look at his stick, and give the name of some familiar object, as a needle, pencil, ruler, candle, column, flute, &c.

She requires them all to lay down their sticks so as to form a line round the table, to give the idea of association. She asks them to take up the sticks, each his own, and give it the name before stated: many ideas may be combined with these associations.

2. Two sticks may now be given with which a new series of questions may be proposed.

Take one in each hand, both in one hand, lay them down, separate them, place them in different positions, — horizontal, inclined, perpendicular, parallel, nonparallel. Cross each other, forming one right angle, two right angles, four right angles, one acute angle, one obtuse angle, one obtuse and one acute angle, two obtuse and two acute angles. Represent any object with which they are familiar; make the letters **I L T V X**, &c.; and arrange them in different ways.

3. Give three sticks: pursue a similar course,—let them form different figures, and count the angles, stating what kind of angles they contain and how many of each kind; also the letters **N Z** in addition to the others.

Form different objects, such as a star, stair, umbrella, flower-pot, roof, guide-post, bridge, knife, fork.

4. Give four sticks, and pursue a similar course, adding the **M W.** Let them make a square, a rhomb, a trapezium, a chair, a dog-kennel, pigeon-house, tent, lanthern, windmill, bed, railway, &c. As the number of sticks increase they will be a pentagon, hexagon, heptagon, octagon, &c. Form a few words by the combination of letters, such as, **ILL TILL MILL WILL IT MIT NIT WIT** &c.; and make Roman figures **I II III IV V VI VII VIII IX X XI XII XIII XIV XV XVI XVII XVIII XIX XX.**

Long and Short Sticks.

1. By this combination an additional number of letters can be formed,—**A E F H K Y**,—which with the others will enable each to form many words. The teacher may dictate thus:—Form **EN**, let all pronounce it; place **F** before it, pronounce again; then make **F** into **H**. What is it now? **HEN**. Make **H** into **K**, **K** into **M**, **M** into **T**, **T** into **W**, and so on; this may be made a pleasing exercise, and of utility, as a basis for future lessons:—

AN	IN	ILL	ALL	ILE	AT	IT	ET	EAT
F	F	F	F	F	F	F	L	F
M	K	H	H	M	H	H	M	H
N	T	K	M	N	L	K	N	M
T	W	M	T	T	M	L	W	N
W		N	W	W	N	M		T
		T		V	T	N		
		W			V	T		
					W	W		

A great variety of words may be formed thus.

2. As an exercise in number and form, give to each child two sticks and require them to form figures with 1, 2, and 4, right angles; give three sticks, and require figures having 2 angles or 3, 4, 5, 6, 7, 8, 10, 12; give four sticks, and require figures having 3 angles, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, or 24; give six sticks, and require figures having any number of angles from 5 to 60.

Should a child be naturally inventive, supply him with an indefinite number of sticks, and allow him full scope to exercise his faculties in making representations of houses, ships, forms of beauty, utility, &c.

From time to time allow the most ingenious to construct a figure for the imitation of the rest; also, allow them to aid each other.

At the end of each exercise cause them to form something in common, in order to exercise the social feeling; and to render the work more pleasing, let it be accompanied with a song.

PEAS WORK,

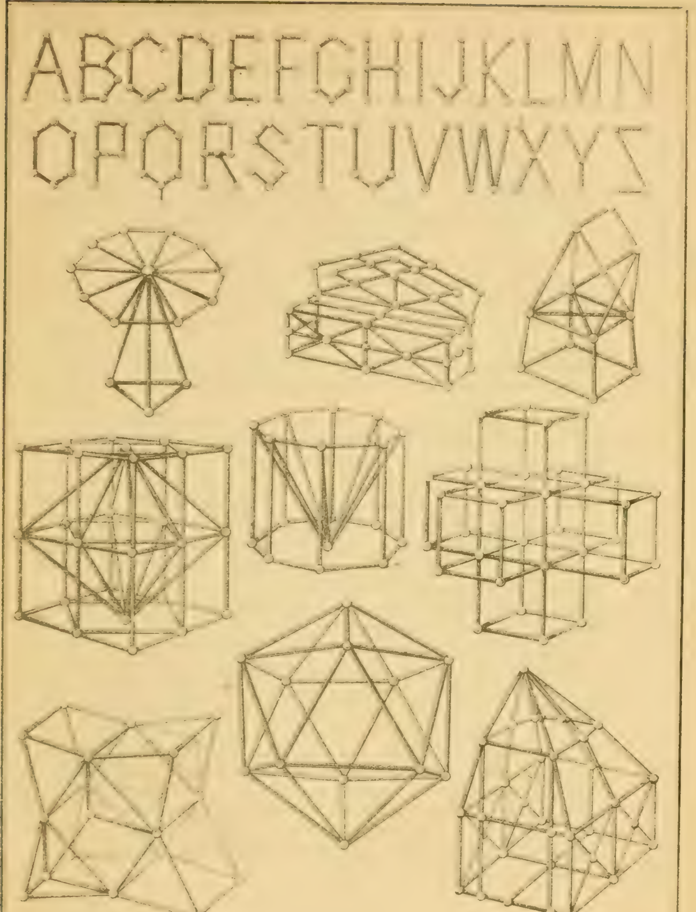
OR STICKS UNITED BY PEAS.

When a child has acquired dexterity in laying sticks upon the table in different directions for the purpose of representing different objects, a desire naturally arises to unite them in some way or other, so that they may have a distinct independent existence. Thus stick laying leads to stick combining.

This practice requires greater skill, care, and delicacy, and can be usefully employed as a means of development after the child is too old for the Kinder Garten.

As to the material, the question naturally arises, which is the most convenient method of combining sticks.

If we watch little children who have the opportunity of free action, we shall find them uniting sticks with clay, but the cleanest and neatest material for this purpose is the pea softened in water.



ABCDEFGHIJKLMN
OPQRSTUVWXYZ

The objects which can be formed by this process, are of immense variety, because it enables the child to represent the outline of the complete figure.

By this process the inventive and constructive power, the perseverance and energy of the child, are called into activity in a far higher degree than by stick laying.

It is of great importance, in this play, that the child has to find a basis upon which each figure must rest ; in stick laying the basis is the table ; but now all objects must be constructed with a view to the law of gravity, or they will not stand : this arouses a consciousness that all things must have a proper foundation.

The first step in these games is, as usual, the most simple. A certain number of sticks and peas are given to the child, and the question is asked, What can you form? In order to ascertain the ideas of each child, they are allowed freely to express their thoughts ; attention being always given to such regulations as are needful to preserve order.

When the teacher has ascertained the peculiar individuality of each child, she gives such examples as she may deem necessary, always commencing with the most simple forms.

1. She takes one stick, places at each end a pea, and asks, What is this like? Different answers will be given according to the different conceptions formed, and the different associations which accompany them, such as, the letter I, a line, a pillar, a pole, a candle, a mace, a pin.

2. She takes two sticks and forms an angle, and requires each to form one of a different kind ; when done they are examined, and it is found that one has formed a right angle, another an acute angle, a third an obtuse angle, &c. : they are told the names of the different angles and required to call them by their proper names.

3. She takes three sticks and forms triangles of all kinds,—equilateral, isosceles, scaline, right-angled triangles, obtuse-angled triangles, acute-angled triangles. With the triangle for a basis, many forms may be constructed,—tent, church-spire, pigeon-house,—crystals, pyramids, obelisks,—figures, letters, different kinds of triangles, &c.

4. She now takes four sticks, and, after allowing the children to exercise freely, gives examples of a different class of objects altogether,—house, table, gate, picture-frame, fire-place,—pyramids, monuments,—square, rhomboid, trapezoid, parallelograms, parallelopipeds.

After this she gives an unlimited number of sticks, and allows free practice, upon the basis of the pentagon, hexagon, heptagon, octagon, nonagon, or polygons of every kind, regular and irregular.

Thus all the figures and letters can be formed, articles of utility and objects of fancy can be constructed.

For this practice special preparation and strict order are required, all the tables must be properly arranged, the sticks properly pointed, and the peas properly softened, or the child will not be benefitted.

Care must be taken to point out, kindly, any defect in form, size, position, proportion, or arrangement, and every encouragement given to those who are unable to produce harmonious forms.

But great care will be required to prevent the impression that what is imperfect is perfect. It may be said that such a form is well done for such a little child, but not that it is well done.

STICKS FOR PLAITING.

This is a relief from those games that require mental action and a greater amount of patience and perseverance.

The sticks are long and flat. Children exercised in laying sticks, and uniting sticks, will easily succeed in plaiting sticks.

To form a figure, five or more sticks are needful. The same general method is adopted;—the child is supplied with the material and free exercise encouraged.

When necessary the teacher assists by forming first simple, and afterwards complex, combinations, such as, a flag, a gate, a window, a fence, &c.

In order to turn everything to account, the child may be asked, How many angles does your object contain? What kind of angles are they? Right, acute, obtuse? How many of each kind have you?

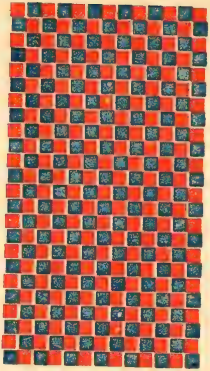
How many triangles does each contain? What kind of triangles are they? How many of each kind, equilateral, isosceles, scaline, right-angled scaline triangles, obtuse-angled scaline triangles, right-angled isoceles triangles, acute-angled isosceles triangles, obtuse-angled isosceles triangles? How many squares, pentagons, rhombs, trapezoids.

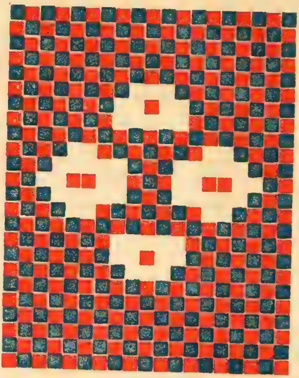
PLAITING, FOLDING, CUTTING, AND PRICKING, PAPER.

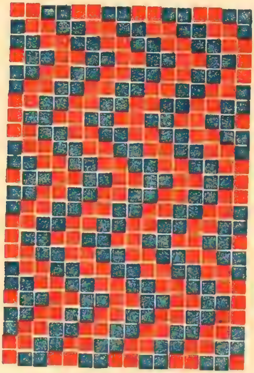
The plaiting of sticks leads to the plaiting of paper; it requires similar manipulation, and contains the same idea,—that of forming separate parts into one whole. It is a continuation of the former occupations.

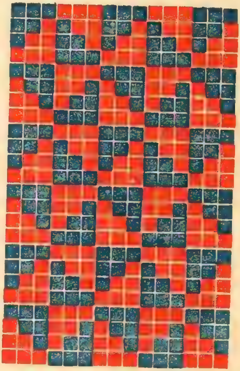
The material, namely, slips of paper, being soft and coloured, requires more skill

PLAITING PAPER. *Plate* LV.

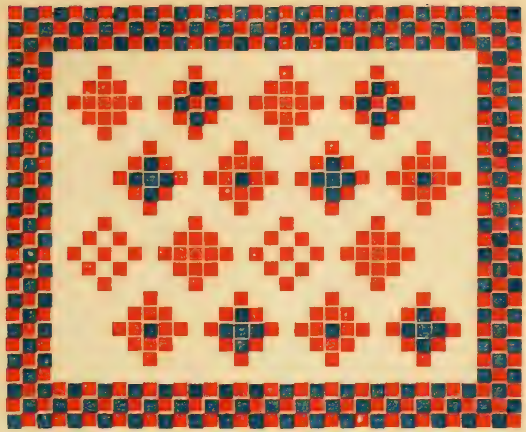


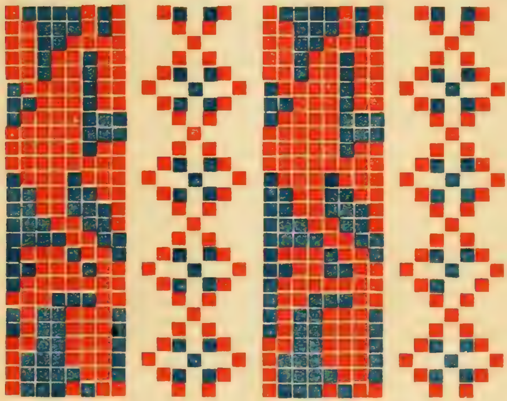






PLAITING PAPER. *Plate* LVI.





and power of combination, as well as a knowledge of the harmony of colours, and a taste for inventing patterns.

Children of five years of age are much delighted with this work, and anxious to manifest their skill in manufacturing little mats, &c.

Many children evince great perseverance and refined taste, though in many cases it is but the exercise of imitation.

The materials required for this work are narrow slips of coloured paper, and a square piece of paper cut into similar slips, but left whole at the margins, not cut through, as will be seen in Plates LV., LVI.

This square must be of some plain colour,—black, white, red, green.

Each child receives such a square, and a number of slips of a colour different to that of the square : also a stick with a notch at one end, in which the slips of paper are fixed; this stick, or needle, as it is called, is passed carefully through every other slip of the prepared square, forming a kind of pattern similar to the one used as a copy.

As the imaginations of children are generally very powerful, they invent patterns by allowing the slips to cover one, two, or more in succession, as fancy dictates; by this means they produce mats so beautiful that persons who have not seen the operation can form no conception of them. Many who have visited our Kinder Garten have expressed doubts as to the possibility of such beautiful designs being produced by children so young.

In this occupation, not only the eyes and hands of the children are educated, but the taste for beauty is developed; order, neatness, and industrial habits, are promoted; they exercise their inventive powers and prepare themselves for useful occupations. The mats can be applied to useful and ornamental purposes, and when more durable materials are substituted the same principle can be applied to the production of articles of general utility.

At the same time this occupation has a moral effect, because when children know that they can do something useful their self-reliance increases.

PAPER FOLDING;

With an Undivided Square Form.

This occupation is in close connection with the former. When children have formed parts into a combined whole, they proceed to manufacture, upon a ground form, new and different objects of various forms, after different directions.

For this occupation the children must have a previous conception of the different objects which they have to form.

The material used is a square piece of paper. Each child having received this paper, is allowed at first to form any object at pleasure, as in the other games.

This being done, the teacher commences her work of development by giving illustrations of different forms, such as a box, basket, ship, boat, stars, &c.

The forms of recognition which can be made, are especially important and practical as a means of conveying an idea of many important truths in geometry.

We commence to give a few examples with the triangular form.

1. Fold the paper so that the two opposite corners unite, forming two right-angled isosceles triangles: by this means it is clearly seen that such a triangle is exactly one half of a square, having the same base and perpendicular.

2. Fold the square in the middle, and two equal parallelograms are formed; and on opening the paper we find two equal right-angled triangles joining each other at the vertices, and two trapezoids equal to each other.

3. Fold the square in the middle the other way, so as to form two equal parallelograms as before, and on opening it we find two equal squares, and four equal isosceles triangles, which are equal to two other squares, or one of the parallelograms.

4. Fold the paper as at first, but unite the two contrary corners, and when opened we find the whole square divided into eight equal right-angled isosceles triangles, having all their vertices meeting in the centre.

5. Fold the same paper into four equal squares, then unite the two corners which have not been before united, and eight equal triangles will be produced; on opening the paper we find a square in the centre, divided into eight equal triangles, and on each side of the square one right-angled triangle divided into two equal triangles: the whole square contains sixteen equal right-angled isosceles triangles. By further foldings a greater variety may be produced.

By these foldings it will be clearly seen that the base of each triangle is longer than either of its sides, and that the two acute angles of each triangle are together equal to one right angle.

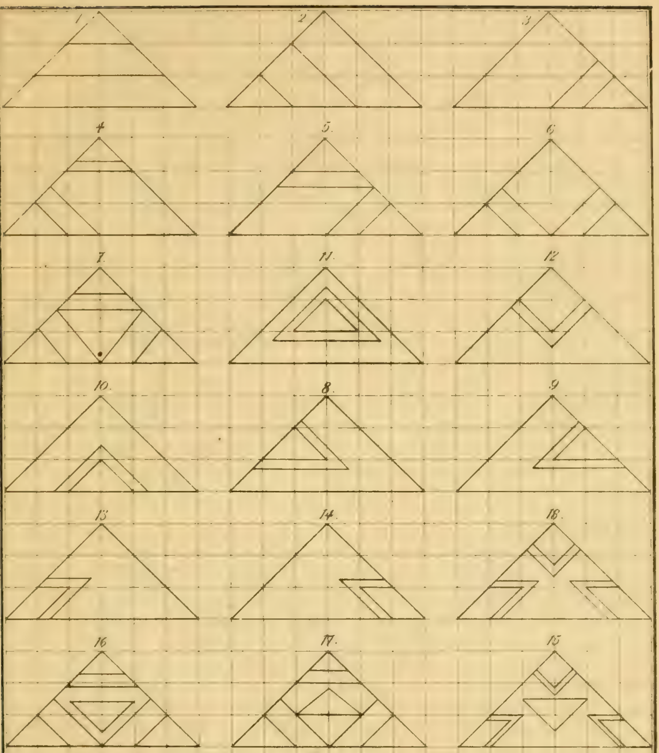
CUTTING PAPER.

Paper cutting is that exercise by which an endless variety of forms are produced by cutting away a portion of the ground form; whereas, by paper folding, the figures are produced upon the ground form.

By paper cutting a still greater variety of forms can be produced, especially forms of beauty.

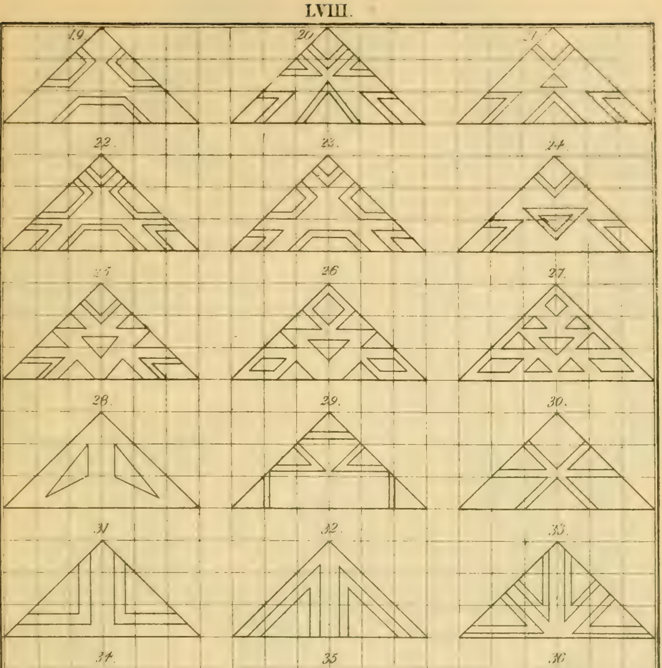
This occupation can be commenced by very young children: and young ladies of

LVII

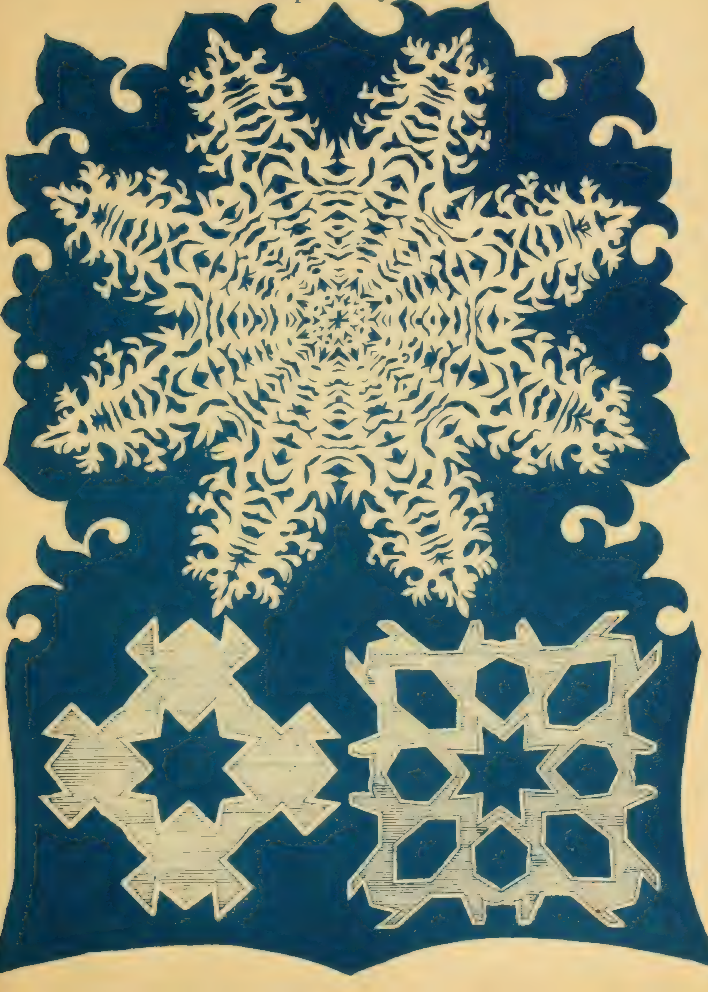


Paper Cutting.

LVIII.



Paper Cutting.



any age, however highly educated, may find in this employment an opportunity of exercising their taste for beauty.

There is no occupation in the Kinder Garten, which affords so wide a field for the gratification of the imagination, and the exercise of the artistic faculties.

The first question is, How to produce the ground form. When each child is provided with a pair of scissors, and a square piece of thin paper, let the following course be pursued :—

1. Lay all the papers straight on the table.
2. Unite two opposite corners so as to form two triangles.
3. Hold the doubled corners in the fingers, and unite the other two corners ; by this means a triangle is produced with one side closed and the other open.
4. Turn one of the folds to the right, the other to the left, keeping the corners where they are all united between the forefinger and the thumb, and cut the paper at the base so as to form an acute-angled isosceles triangle.
5. Make cuts through this folded acute-angled triangle, and an endless variety of forms may be produced.
6. Lay the forms together so as to shew their connection.

These first manipulations can be easily performed by the youngest children. When done, the little figures are collected, put into an envelope, and taken home ; the best are pasted on paper and hung up in the room.

After the children have attained dexterity and ability in cutting, they are taught to cut into the ground form without cutting through it, (by which means such forms as those on the coloured Plate, LIX., are produced,) and trained to imitate leaves, flowers, combinations of leaves and flowers, with an immense variety of beautiful forms which cannot be described.

In such perfection are these forms produced, that no one unacquainted with the method can form a conception of them.

The results of this occupation can be used as patterns for embroidery, crochet, lace work, carpeting, calico printing, &c. Common paper can be used for the first exercises, but for the more delicate forms the finest satin paper is required.

DRAWING.

When children are introduced into any branch of instruction, the principle, the material, and the object intended to be attained, are first to be considered ; and it is necessary to proceed methodically, *i. e.*, in accordance with the age of the children, and the degree of culture at which they have arrived. As this method of drawing is altogether new, and accommodated to children from the age of three to seven years, a brief description of it is given ; but it is to be remarked, that it must be properly learned by teachers, otherwise they will only be able to teach their pupils how to *copy*, but not how to *draw!*

The principle is the same as that which governs the whole system ; the children are to be, so to speak, the masters or free workers, not the slaves, of the material ; they are led to produce and to compose, not to copy. The dignity of man—the germ of which is also in every child—is thus the moral ground-work for the teacher. With regard to the material, parents may ask, What is a child of three or four years of age able to draw ? The answer is, "lines;" which are the first forms that every one has to learn, who would draw.

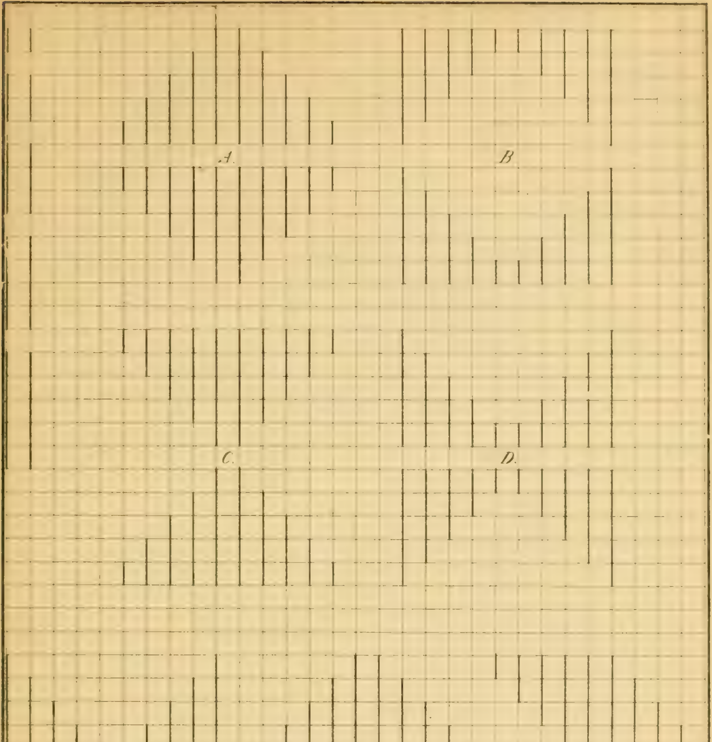
Every child can make lines, especially when the slate or the drawing-book contains ruled lines; so that as this is the case by this method, the child is at first to be assisted to form straight lines. Accordingly, the children learn first to make five lines, each line a square longer than the preceding. The next question will be, What object or end is to be attained with this material ? The method places before us the task to form the triangle, the right, obtuse, and acute angles, in perpendicular and horizontal lines, the formation of the cube, and of the circle. The children are led to make these figures from five lines in various positions, but no copy is set before them. Sometimes, however, the teacher may shew the figures in order to give a clearer illustration for children who do not easily perceive.

The moral use of this method is obvious. The intellect of children of from three to six years of age, is exercised in becoming acquainted with the nature of the triangle, cube, and circle. They are led to collect their thoughts, to keep their minds employed in composing freely the mathematical figures mentioned. It will be especially of great use for those children whose thoughts are easily distracted, and their parents will find in it the best remedy.

Experience sufficiently shews, that there are many, who find in every progress, in opposition to the old way of teaching, an offence, from the very reason, that they do not know it. Those find this method of Drawing, as well as the whole system, at least very singular, and not apparently useful enough. They believe far more to have been obtained, when their pupils and children have learnt to copy some objects laid before them, and that child is most praised, which has the best talent to copy minutely.

Froebel calls his method of drawing, "drawing in the net," and affirms that it is in strict accordance with the nature of man, or the law of his inward life. "The head and breast line," says he, "are the medium of our observation and conception of form."

In conceiving forms we always refer them to this medium—or to the right angle which exists in the line of sight ; and we measure them, accordingly, with our thoughts.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B.
C.
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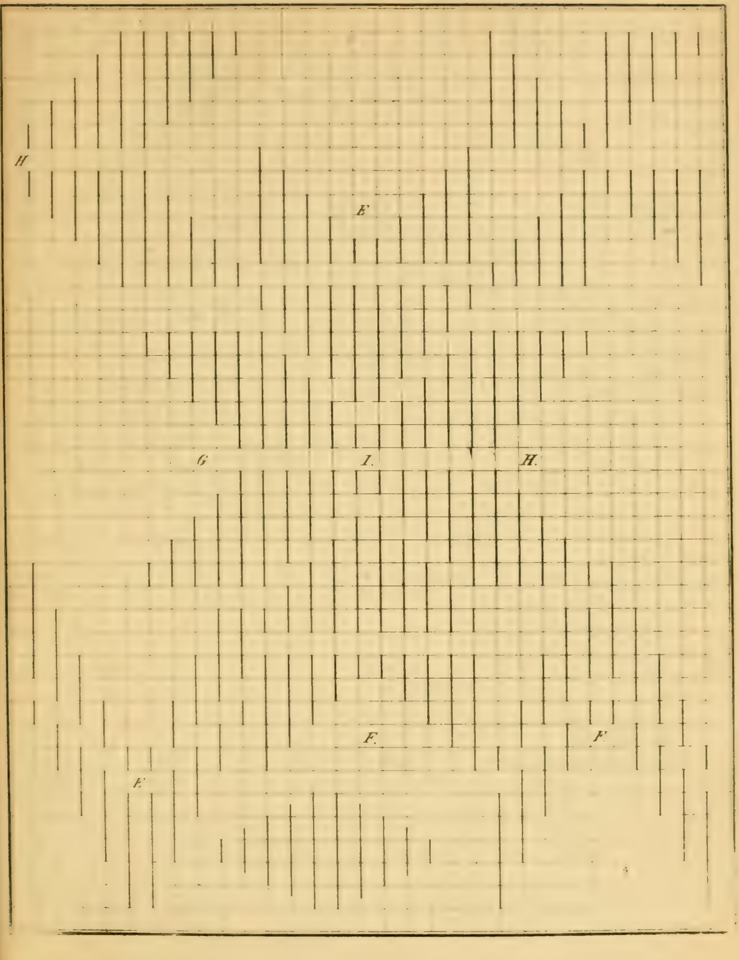
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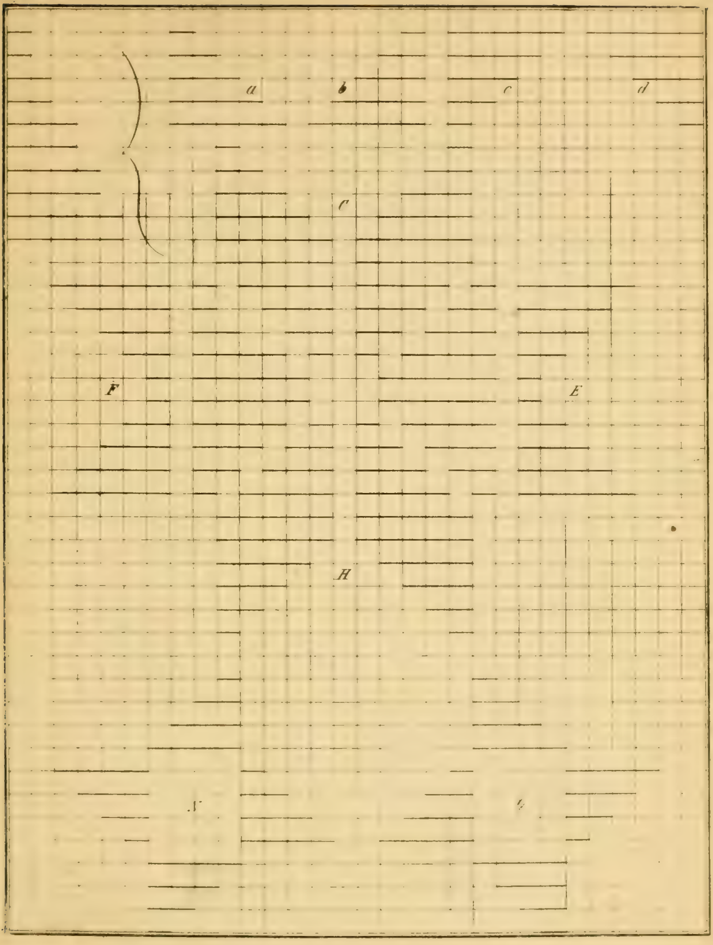
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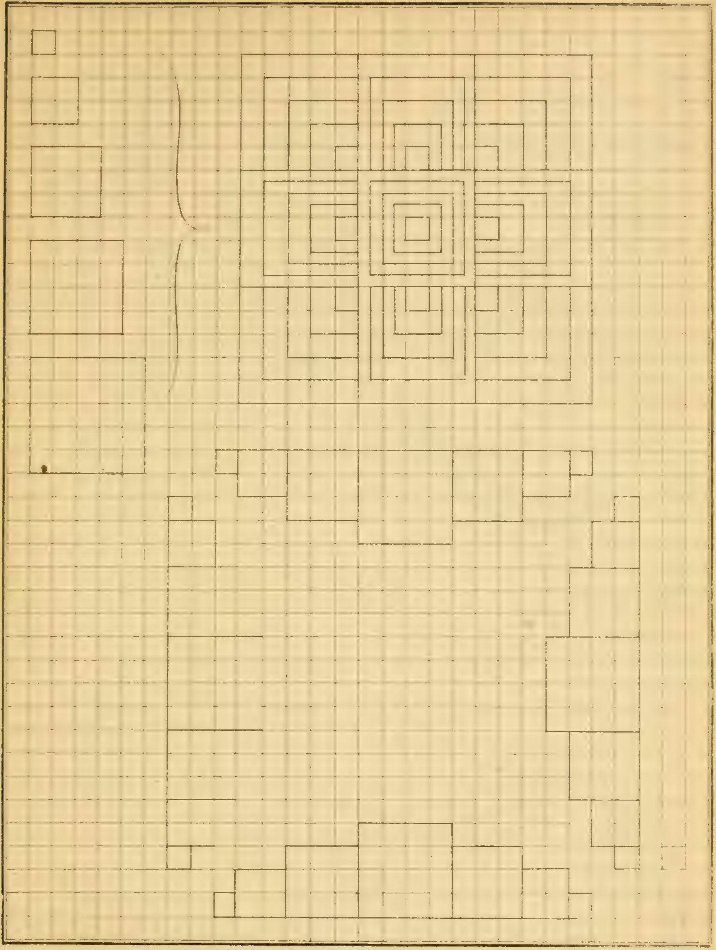
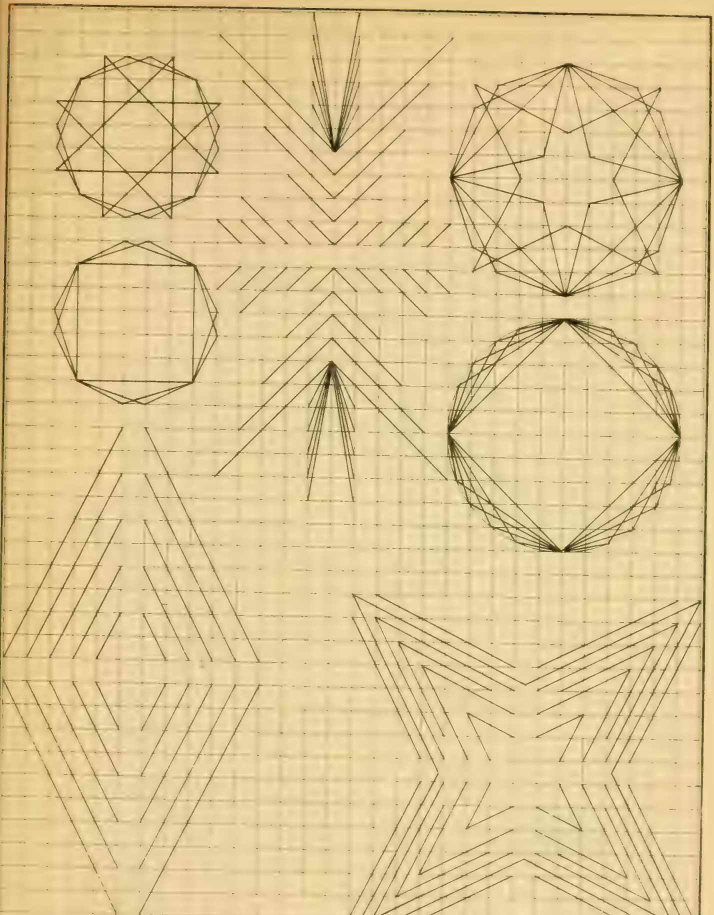
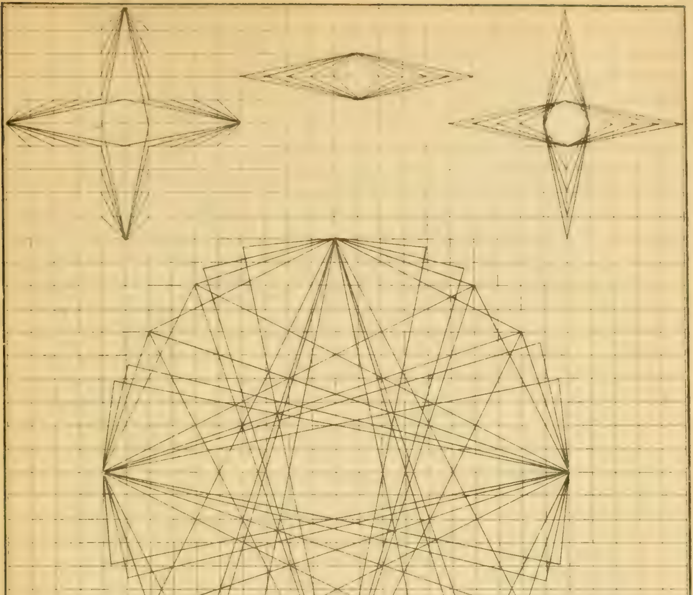




LXV



Of this we become the more conscious, the more we observe external forms. As we perceive the representations of external forms in a right angle, drawing in a square is a natural operation.

If perpendicular and horizontal lines are drawn at equal distances, and extended equally in both directions, a net work of equal squares will be formed.

The form of the triangle results necessarily from that of the square, as the triangle is one half of the square, each having the same base and perpendicular.

Drawing exercises are commenced very early—as soon as a child enters the Kinder Garten—as none are too young to make strokes in an engraved line.

In order that mistakes may be easily corrected, and imperfect figures easily erased. the Slate is used at the commencement, afterwards the Drawing Book should be used: and that the slates may be in accordance with the principles propounded, they are engraved in the form of a net of equal squares,—the most convenient size of each square is one quarter of an inch.

The instructions given are closely connected with the games of the Third Gift, in order that there may be a continuation of the course of development.

We give a short description; but it is impossible to explain the whole method so clearly as to allow of its being practised without patterns, and a certain amount of training.

It is desirable that the teacher should have a large slate, or black board (ruled like the slates), which can be clearly seen by all the children.

1. The teacher draws a perpendicular line from one angle to another, and says, I have drawn a perpendicular line. Each child is now required to do the same a few times, and express in words what has been done. For example,—I have drawn one, or two, or three perpendicular lines. By habituating the children to express in words what they have done, they become accustomed to think and to form a clear conception of what they do.

2. A perpendicular line is made through two squares, and the children are asked if this is equal to the former; if not, What is the difference? Is it in the same direction? Is it longer? How much longer? The children are now required to make similar lines, and express in words, as before, what they have done. This course is continued until the children can draw lines through five squares, upwards and downwards. We do not go further than five, as in that number all other equal and unequal lines are contained.

3. In the same manner as with the perpendicular lines, the children are exercised with the horizontal lines.

4. Perpendicular and horizontal lines are united to form right angles: these lines are extended to different lengths, beginning with one square. Let the children continue to express in words what they have done, *i.e.*, I have united a perpendicular line to a horizontal line in one point. Vary the length of the lines, making one long the other

short; one twice as long, three times as long, &c.; and cause the child to express that difference in words, in order to educe the variety of conceptions.

5. When the children have been sufficiently exercised in the formation of the right angle, proceed to the square of one, two, three, four, five. When they have made a square of two lines let them divide it equally, and state what number of squares the square of two contains, *i. e.*,—

The square of two contains four equal squares.
The square of three contains nine equal squares.
The square of four contains sixteen equal squares.
The square of five contains twenty-five equal squares.

6. Let them now proceed to form parallelograms of different kinds,—with

One perpendicular, two horizontal.
One perpendicular, three horizontal.
One perpendicular, four horizontal.
One perpendicular, five horizontal.
One horizontal, two perpendicular.
One horizontal, three perpendicular.
One horizontal, four perpendicular.
One horizontal, five perpendicular.

Divide them and express the number of squares contained in each, as before.

7. Connect the corners of the squares with diagonal lines, that the children may learn precisely the inclination of the line. Pursue the same course with the diagonal lines as with the horizontal and perpendicular lines.

Exercise them in the formation of the acute angle and the obtuse angle, as was done with the right angle.

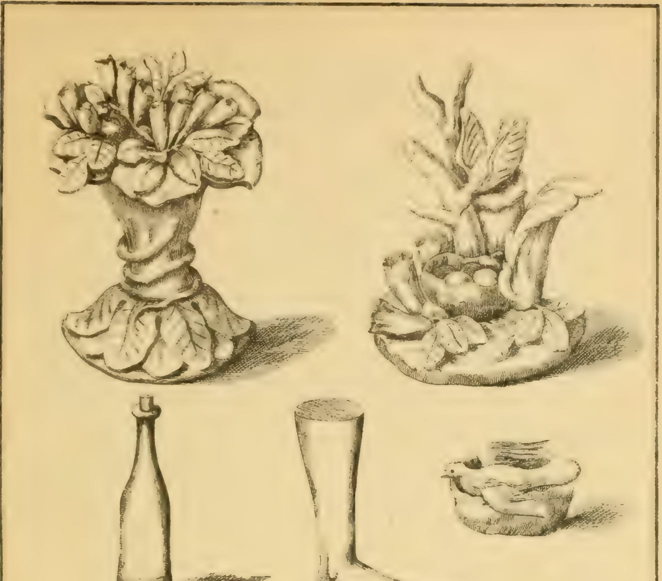
Exercise them in the formation of rhombs as in squares; also in the formation of rhomboids as in that of rectangles.

In accordance with the above directions, follow the routine described in the Plates LX. to LXV.

MODELLING.

This is one of the most important occupations in the Kinder Garten, and affords such an extensive field of operation that children of all ages can exercise themselves with advantage.

In this employment the child becomes greatly absorbed; and in general, if allowed, will work silently for a long time.



The method employed in the introduction of this occupation—which is the commencement of the art of Sculpture—must be acquired in the Training School, as it is impossible, in written language, to describe it. We shall, therefore, only give a few examples.

The material, whether clay, rice, wax, or whatever else may be employed, must be previously prepared, and always kept in a plastic state.

Wax prepared with oil is more expensive but far cleaner than clay; it is, however, of little importance what material be used, if it contains no injurious ingredients.

The material being prepared, each child is supplied either with a small flat board, slate, cloth, or strong paper, to cover the part of the table used; a small blunt elastic knife, and a portion of the plastic material. Each child is first left to pursue the bent of its own inclination,—generally the roller and the ball are the first objects attempted: in their formation the child finds great delight.

When these simple forms can be made with a certain degree of perfection, cubes, prisms, pyramids, cones, and crystals of different kinds are imitated. The children are encouraged to form little flower-pots, baskets, vases, birds' nests, candlesticks, houses, &c.

When any object is well formed it is preserved as a model.

A child will persevere in trying to accomplish what another child has done, with far greater determination than if the same object had been produced by an adult, in this more than in any other employ.

Having proceeded thus far, models of animals, &c., are given for imitation; but it must ever be borne in mind, that the chief object is to develop the creative powers: imitation being a secondary consideration.

PAINTING.

Many of the previous exercises,—such as plays with coloured balls, cutting and plaiting paper, forming letters and forms of beauty with cards of different colours, &c.,—tend unconsciously to develop the faculty of colour, teach the names of different colours, and induce children to observe the differences and resemblances of coloured objects. Now that the children have to make use of colours, lessons of a more specific kind are requisite.

1. The conception of colours must be united with the conception of forms.
2. The forms chosen for the first lessons must be definite and simple, and the colours pure and lively.
3. The primary colours,—red, yellow, and blue,—should be first fully understood, and freely used.

4. The simple shades of the primary colours, as light and dark.
5. The compound colours,—green, brown, violet, drab.
6. The different hues of both primary and compound colours,—
    - Blue,—Indigo, Prussian, sky, Waterloo.
    - Red,—crimson, vermilion, blood, morone, flesh, pink, rose.
    - Yellow—lemon, primrose, canary, gold, orange, saffron, cream, honey, wax, umber, ochre.
    - Green,—apple, grass, olive, pea, bottle, myrtle, emerald, sea.
    - Brown,—chesnut, liver, clove, chocolate.
    - Black,—jet, blue, rusty.
    - White,—snow, bluish, dirty, greyish, ivory, reddish, brownish, milk, pearl, French.

7. The fundamental colours of plants should be well known and illustrated by living examples, *i.e.*, white, grey, black, blue, green, red, and brown.

8. The varieties which each of these colours exhibit should be pointed out whereever practicable ; and the children ought to be encouraged, from time to time, to bring examples of those varieties.

9. A box of water-colours should be obtained, and, by mixing those colours, the children may be taught how the compound colours and their varieties are produced.

It is well to accustom children to distinguish the different tints of natural objects, in preference to artificial representations ; and whenever practicable to allow them to imitate those natural tints.

Leaves of trees can be obtained at all times,—the minds of all children are familiar with their colour ; hence leaves of trees are the first objects painted by the children.

1. The teacher obtains as many simple leaves as are required of the same form ; and the child either copies their forms on paper, or cuts paper of the same shape : this done, the primary colours, blue and yellow, are mixed so as to produce the one required, and with a small brush the paint is applied.

2. Collect the petals of flowers, the simplest that can be obtained, and pursue a similar course.

When the children are practically acquainted with the colours, they begin to paint in the net.

The squares are painted according to the principle propounded in the drawing method, beginning with one square and continuing to five.

This exercise commences with the pure primary colours, and is followed by the addition of gold, yellow, and violet ; by which the harmony of colour becomes fixed in the mind.

In this manner the various forms of beauty are painted, and colouring is given to the endless variety of forms of use, which the child copies into his drawing-book, from the erections made by the aid of the Third, Fourth, Fifth, and Sixth Gifts.

Whenever a child shall have produced an approximation to the true harmony of colour, such a production may be preserved and exhibited as worthy of imitation.

Having proceeded thus far, wings of insects, birds, and other living objects are copied and painted, until the children are old enough to enter the Upper School, where the same system is continued.

The importance of this exercise does not end with the power to copy natural or artificial objects. It has a moral effect; it leads the mind to observe the wonderful harmony existing in nature, and creates a longing after the source of so much beauty.

Colour being the result of the influence of light; and light being an essential source of life, these exercises may lead naturally to the true source of light and life—to God.

Children thus trained are not so much pleased with a mass of colours as they are with their harmony: and their constant effort is, whenever they have the opportunity, to collect the greatest variety of flowers, &c., and arrange them according to their own ideal of the beautiful.

MUSICAL GYMNASTIC EXERCISES.

These exercises are of the greatest importance, especially in our times; having been so long neglected, not only in schools, but in the general education of the people.

Children require, not only meat and drink, but fresh air, light, the influence of the sunshine, and well graduated exercise. "A sound mind," said Cicero, "can only exist in a sound body."

Frederick Froebel made gymnastics an essential part of infant training. Several of his followers have improved and extended the system which he devised; and we, in the English Children's Garden, have adopted whatever is applicable to this country, not only in the system of F. Froebel, but in other systems, both ancient and modern, so far as we have found them in accordance with the laws of physical development, and calculated to promote health, happiness, physical beauty, and intellectual and moral worth.

In the human body are upwards of four hundred muscles. By proper exercise they are strengthened, and the processes of digestion, respiration, secretion, absorption, nutrition, and circulation are promoted.

In healthful exercise the brain, the nervous system, and the muscles, are brought into harmonious operation, and the mind exhilarated.

To render these exercises truly beneficial, the conditions of their healthful action must be taken into account; for instance, they must not be indulged in at improper times, such as immediately before or after a meal, nor continued so as to produce weariness, nor in improper places, such as closely confined rooms, in an impure atmosphere, or in the open air, when the weather is unfavourable.

Having these conditions in view, the movement plays of the Kinder Garten have been arranged.

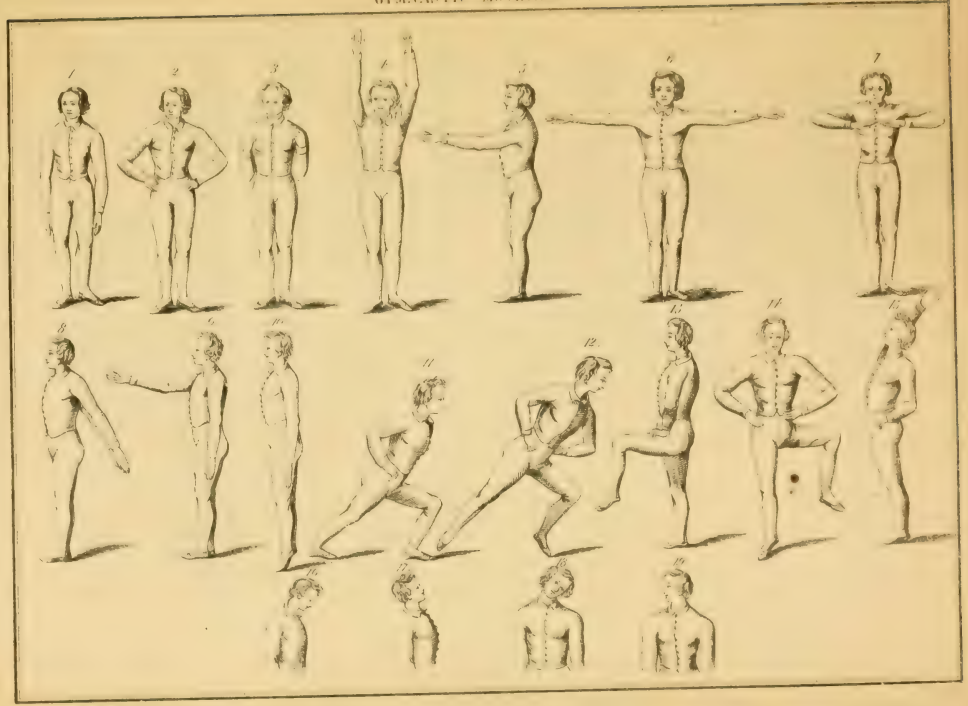
To prevent deformities of the spine, no child is allowed to remain too long in one position.

To secure the co-operation of mental, nervous, and muscular action, all movements are accompanied with songs, which enlist the sympathies, excite the imagination, and cause the children to "suit the action to the word."

These plays are plays of union and order. Every motion is according to rhythm; as the hands of the clock are together at the hour of twelve, so the given muscles are expanded or contracted, as the intention may be, when a given word is pronounced in a given note; and there is not a muscle in the body, not an organ of the mind, requiring exercise, that by these plays does not receive its necessary stimulus.

GYMNASTIC MOVEMENTS.

Plate LXVII



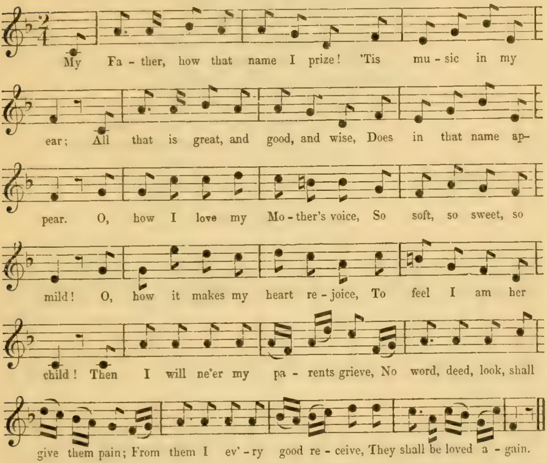
These plays are adapted to very young children; they have been invented by children, and collected, set to music and appropriate words by practical educators, who have acquired the power to teach by observation.

INTRODUCTORY SONGS.

These and similar songs are sung at the commencement of the exercises, and during some of the games with the Third and Fourth Gifts.

I.

The Happy Home.


My Fa - ther, how that name I prize! 'Tis mu - sic in my
ear; All that is great, and good, and wise, Does in that name ap-
pear. O, how I love my Mo - ther's voice, So soft, so sweet, so
mild! O, how it makes my heart re - joice, To feel I am her
child! Then I will ne'er my pa - rents grieve, No word, deed, look, shall
give them pain; From them I ev' - ry good re - ceive, They shall be loved a - gain.

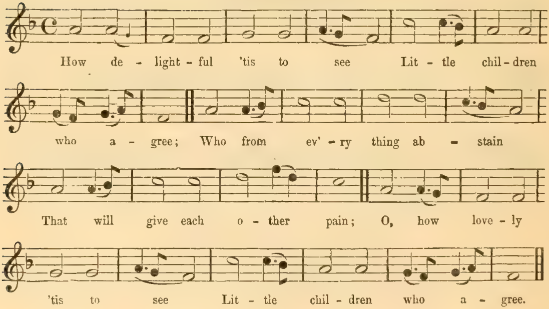
O how I love my peaceful home,
Where my dear parents dwell;
Where strife and discord never come
Their tales of woe to tell.

I love my sister's winning looks,
  My brother's playful ways;
Their dolls, their toys, their simple books,
  All speak of happy days.
    Then I will ne'er forsake my home,
      But care for those who care for me;
    Though fame or wealth tempts me to roam,
      With them my home shall be.

When age shall deck their smiling brows
  With locks of silvery grey,
My voice shall lull them to repose,
  My arms shall be their stay:
And when the parting hour of death
  Shall bid our union cease,
I'll catch their last expiring breath
  And part with them in peace.
    And when I wander o'er their tomb,
      And think what love to me they bore,
    'T will bind me to my happy home,
      And make me love it more.

II.

The Pleasant Sight.


How de - light - ful 'tis to see Lit - tle chil - dren
who a - gree; Who from ev' - ry thing ab - stain
That will give each o - ther pain; O, how love - ly
'tis to see Lit - tle chil - dren who a - gree.

Angry words they never speak,
  Promises they never break,
Unkind looks they never show;
  Love sits smiling on each brow.
          O, how lovely 'tis to see
          Little children who agree.

They are one in heart and mind,
  Courteous, pitiful, and kind;
Willing others to forgive,
  And make happy all who live.
          O, how lovely 'tis to see
          Little children who agree.

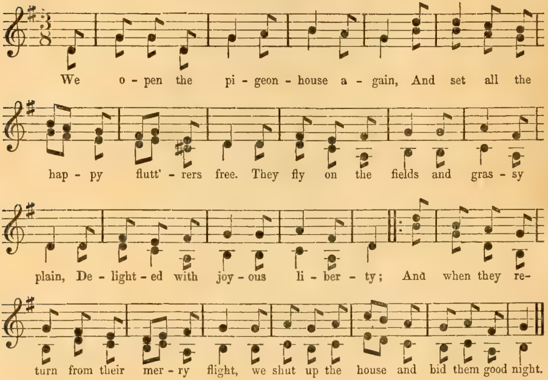
When at home, at school, at play,
  They are cheerful, blythe, and gay;
Always trying to increase
  Human pleasure, social peace.
          O, how lovely 'tis to see
          Little children who agree.

If we for each other care,
  All each other's burdens bear,
Soon the human race will be
  Like one happy family.
          O, how happy 'tis to see
          Little children who agree.

IMITATION OF NATURAL AND ARTIFICIAL MOVEMENTS.

III.

The Pigeon-House.


We o - pen the pi - geon - house a - gain, And set all the
hap - py flutt' - rers free. They fly on the fields and gras - sy
plain, De - light - ed with joy - ous li - ber - ty; And when they re-
turn from their mer - ry flight, we shut up the house and bid them good night.

Three-fourths of the children join hands and form a closed circle, representing a pigeon-house, the remainder stand close together inside the circle to represent the pigeons in the house.

When they begin "We open the pigeon-house again," those forming the circle raise their hands and arms, and make the circle as large as possible. Those inside, "the pigeons," run out, moving their little hands and arms like the wings of a bird; they continue running round the room, garden, or playground, until they hear the commencement of the fifth line, "And when they return ——;" when they make their way home as quickly as possible, and enter the circle as the song closes. The circle is gradually closed as the last line is sung; should any be too late, they cannot be admitted, unless by the entreaty of those within. See the Engraving of "The Pigeon House."

THE PIGEON HOUSE.

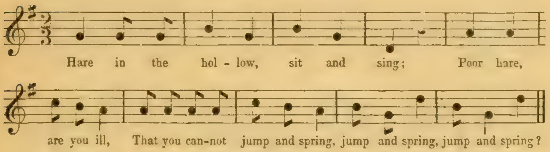
This song is repeated as often as may be deemed advisable, or until each in turn has represented one of the pigeons.

This game is intended to extend the arms of those forming the circle (as in position 6, Plate LXVII.) and exercise the wrists in particular, and all the muscles employed in running by the action of the pigeons. This exercise of the wrists is an excellent method of preparing the hands for the practice of such employments as require manual dexterity and lightness of touch.

The faculty of time is also excited, and feelings of sympathy with the subjects of the game unconsciously aroused.

IV.

The Hare in the Hollow.



Hare in the hol - low, sit and sing; Poor hare,
are you ill, That you can-not jump and spring, jump and spring, jump and spring?

Hare now be careful,
Sit quite still,
The hunter is near;
Dogs are running down the hill,
Sit quite still, sit quite still.

Hare now be cheerful,
Sit and sing,
All danger is past,
You may sing and jump and spring,
Hare now spring, hare now spring.

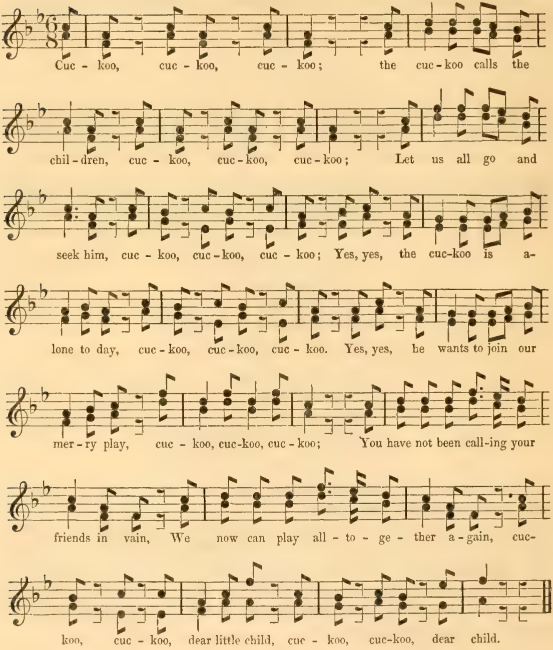
Three-fourths of the children take hold of hands and form a circle; the remainder occupy the centre in a half sitting posture.

Those forming the circle move round and sing, keeping time with the tune. Those in the centre remain still, until the line, "jump and spring," when they spring up and catch whom they please. Those who are caught become hares; the first hares join the circle; and the second verse is sung. During the second verse, the hares do not move: but when the last line of the third verse is sung, up spring the hares, as at the first verse, and the song again commences.

By this game the muscles of the trunk and the lower extremities are particularly exercised, and feelings of cautiousness and pity specially aroused.

V.

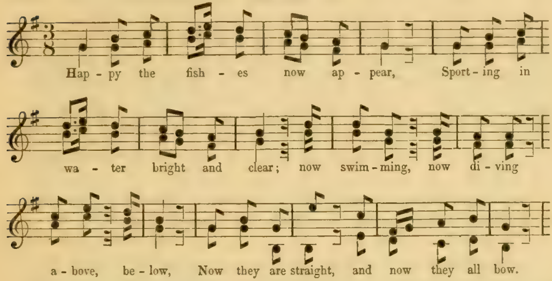
CUCKOO.


Cuc - koo, cuc - koo, cuc - koo; the cuc-koo calls the
chil-dren, cuc - koo, cuc-koo, cuc-koo; Let us all go and
seek him, cuc - koo, cuc-koo, cuc - koo; Yes, yes, the cuc-koo is a-
lone to day, cuc-koo, cuc-koo, cuc - koo. Yes, yes, he wants to join our
mer-ry play, cuc - koo, cuc-koo, cuc-koo; You have not been call-ing your
friends in vain, We now can play all - to - ge - ther a-gain, cuc-
koo, cuc - koo, dear little child, cuc - koo, cuc-koo, dear child.

One-fourth of the children hide themselves, representing cuckoos, and sing "Cuckoo, cuckoo." The rest promenade singing the song, and representing the companions of the cuckoos seeking them. As the words indicate, they find each other; when they are glad and promenade together, singing the chorus.

VI.

FISHES.


Hap - py the fish - es now ap - pear, Sport - ing in
wa - ter bright and clear; now swim - ming, now di - ving
a - bove, be - low, Now they are straight, and now they all bow.

One-fourth of the children form a circle, representing the banks of a fish-pond; the remainder move about in the centre, representing fishes swimming, as in position 7, Plate LXVII.

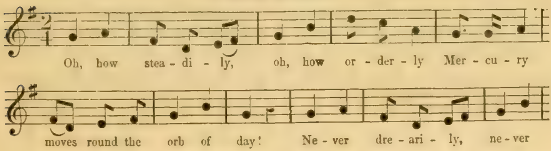
Those forming the circle move round in proper time, singing the song.

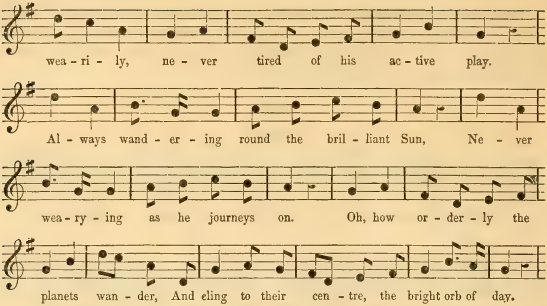
When they sing "Now diving," the fishes change their motions extending their arms, as in position 5. They bend the body, or stand erect, as the words indicate.

This exercise is of great use in the development of the muscles of the trunk, particularly the chest.

VIII.

SOLAR SYSTEM.


Oh, how stea - di - ly, oh, how or - der - ly Mer - cu - ry
moves round the orb of day! Ne - ver dre - ari - ly, ne - ver


wea - ri - ly, ne - ver tired of his ac - tive play.
Al - ways wand - er - ing round the bril - liant Sun, Ne - ver
wea - ry - ing as he journeys on. Oh, how or - der - ly the
planets wan - der, And cling to their cen - tre, the bright orb of day.

The tallest child stands in the centre of the room, to represent the sun, holding in his hand as many ribbons as there are planets, each longer than the other.

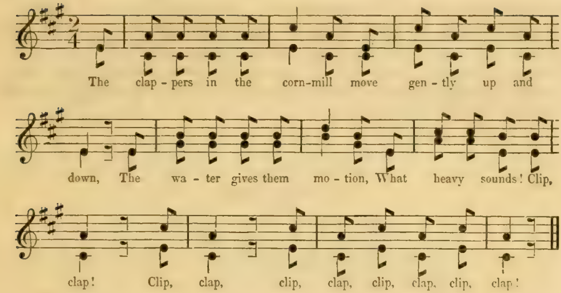
The smallest child represents Mercury, and taking hold of the shortest ribbon moves round the sun, to represent his annual motion: during this circuitous motion he turns round upon his heels, extending the hand that holds the ribbon over his head, to imitate his diurnal motion. While Mercury is making his revolution all the children forming a circle round the room, sing the first verse. As the song ends the next child in size represents Venus, and, taking hold of the second ribbon, imitates Mercury, who still continues his revolutions. The song is repeated,—" Venus " being substituted for " Mercury " in the second line. At the end of the song a third represents the Earth, and "Terra" is substituted for " Venus." A fourth represents Mars, and "Mars is moving" is substituted for " Mercury moves." A fifth represents Jupiter; a sixth Saturn; a seventh Herschel; an eight Neptune: the names being substituted for " Mercury," as before.

The last time the song is repeated, while all the planets are moving, the words " Planets move," are substituted for " Mercury moves."

This game is intended to familiarize the children with the motions of the heavenly bodies. The ribbons convey the idea of their attraction to the Sun, and their different distances. Their movements round the Sun represents the planets' annual motions in their orbits; and the movements of each upon his heels educes the idea of the planets' diurnal, or daily, motions.

IX.

THE CLAPPERS.


The clap - pers in the corn-mill move gen - tly up and
down, The wa - ter gives them mo - tion, What heavy sounds! Clip,
clap! Clip, clap, clip, clap, clip, clap, clip, clap!

The children are arranged in a circle, and taking hold of hands, move round as they sing the song, keeping time with their feet; also, at the same time, imitating the noise of the clappers in the corn-mill.

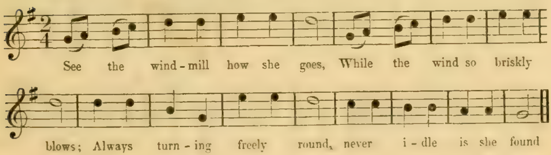
While they sing the song the first time they turn to the left; when they repeat, they turn to the right.

When they sing the words, "Clip, clap," they clap hands twice, count two, clap twice again, count two, and then clap six times.

By this movement the legs and feet are well exercised, and the time is strongly impressed upon the minds of the children.

X.

THE WINDMILL.


See the wind-mill how she goes, While the wind so briskly
blows; Always turn - ing freely round, never i - dle is she found

The children form a cross, representing the wings of the windmill. Four little children join their left hands in the centre; four others rather taller take hold of their right hands. If there be room, four others, taller still, may join them. The two opposite wings keep a straight line. When the song commences, they move in a circle. The movements are sometimes slow, sometimes quick; but always in time with the tune.

If the children are nearly equal in size, the following change is made every time the song is repeated;—when the words, "Always turning freely round," are sung the second time, the outside children take the centre, and the centre ones the outside; having the right hands joined instead of the left. This change is effected in a moment, without interfering with the order of the song.

XI.

The Waterwheel.

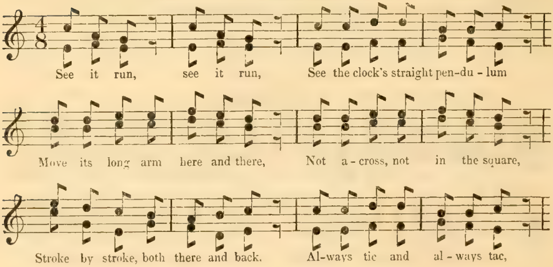
See the waterwheel, how she goes,
While the water quickly flows;
Always turning freely round,
Never idle is she found.

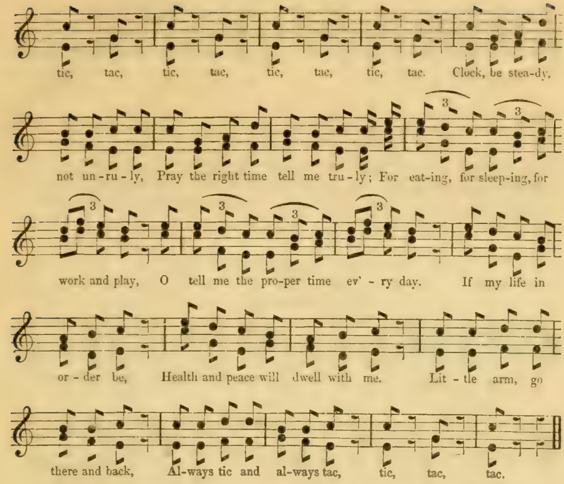
The music and the motions are the same as the last.

Eight children cross their left hands in the centre, and move round as they sing, keeping time with the tune, representing the waterwheel.

XII.

The Pendulum.

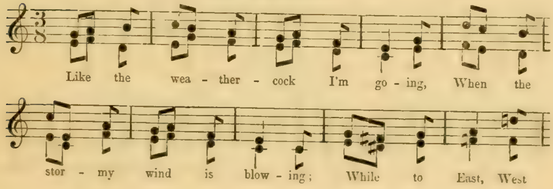

See it run, see it run, See the clock's straight pen-du - lum
Move its long arm here and there, Not a - cross, not in the square,
Stroke by stroke, both there and back. Al-ways tic and al - ways tac,

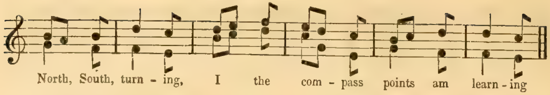

tic, tac, tic, tac, tic, tac, tic, tac. Clock, be stea-dy,
not un-ru-ly, Pray the right time tell me tru-ly; For eat-ing, for sleep-ing, for
3
work and play, O tell me the pro-per time ev' - ry day. If my life in
or - der be, Health and peace will dwell with me. Lit - tle arm, go
there and back, Al-ways tic and al-ways tac, tic, tac, tac.

This play is intended to exercise the arms, and the faculty of time. The children are placed in two columns, and told to move first the left arm, and then the right arm, in imitation of the pendulum, keeping time with the song.

XIII.

THE WEATHERCOCK.

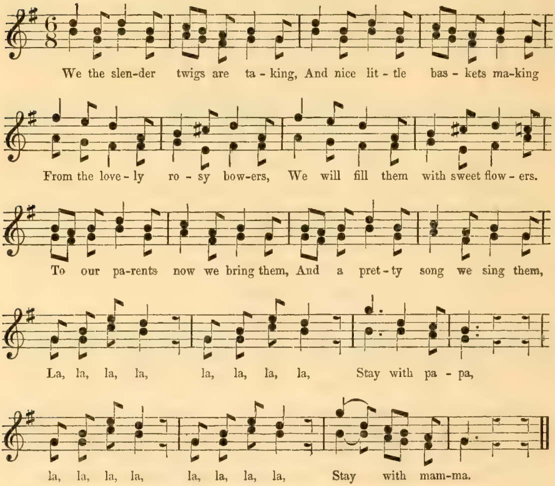

3/8
Like the wea - ther - cock I'm go - ing, When the
stor - my wind is blow - ing; While to East, West


North, South, turn - ing, I the com - pass points am learn - ing

The children are arranged as before, in two columns. The arms are now held up nearly perpendicularly. Each holds his arms still, moving only the hands, in the directions indicated in the song, at the time the different directions are referred to. When practicable it is desirable that the children face the north, in order that the points of the compass may be impressed upon their minds, in accordance with the general arrangement of maps.

XIV.

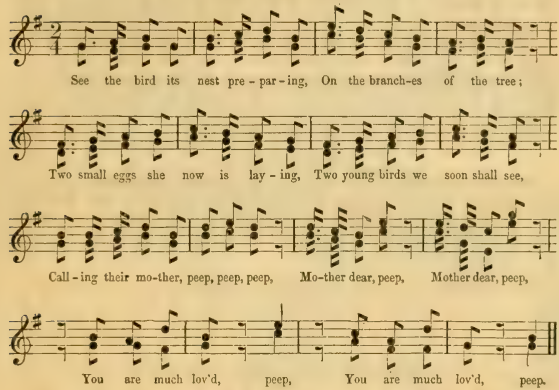
The Basket.


We the slen-der twigs are ta - king, And nice lit - tle bas - kets ma-king
From the love - ly ro - sy bow-ers, We will fill them with sweet flow - ers.
To our pa-rents now we bring them, And a pret - ty song we sing them,
La, la, la, la, la, la, la, la, Stay with pa - pa,
la, la, la, la, la, la, la, la, Stay with mam-ma.

The children stand as before, in two columns. Each child unites his fingers so as to imitate a little basket; and as the song is sung the arms and the trunk are moved from right to left according to the tune.

XV.

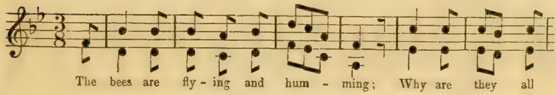
The Bird's Nest.

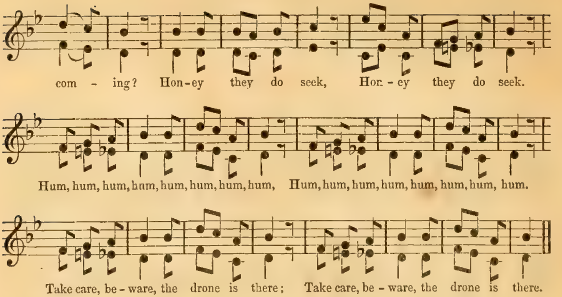

See the bird its nest pre-par-ing, On the branch-es of the tree;
Two small eggs she now is lay-ing, Two young birds we soon shall see,
Call-ing their mo-ther, peep, peep, peep, Mo-ther dear, peep, Mother dear, peep,
You are much lov'd, peep, You are much lov'd, peep.

The children stand as before, each uniting his fingers to imitate a nest, with the thumbs turned inwards to represent two little eggs. When they have sung the words, "Two young birds we soon shall see," they move their thumbs outwards, and exercise them to imitate the fluttering of young birds.

XVI.

The Bees.




com - ing? Hon-ey they do seek, Hon - ey they do seek.
Hum, hum, hum, hum, hum, hum, hum, hum, Hum, hum, hum, hum, hum, hum, hum, hum.
Take care, be - ware, the drone is there; Take care, be - ware, the drone is there.

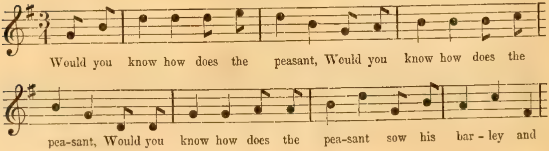
One child is placed alone, in a distant part of the room or playground, to represent the drone; the others represent the bees, and stand on the opposite side, singing the song. When they arrive at the words, "Take care," the drone tries to catch one of them; they all avoid him as long as possible. When one is caught, that one becomes the drone.

IMITATION OF HUMAN LABOUR.

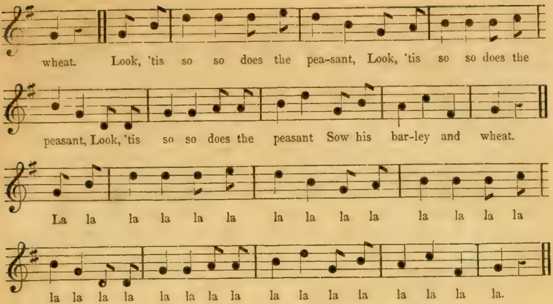
THESE games have the tendency to awaken a love for usefulness and labour.

XVII.

THE PEASANT.


Would you know how does the peasant, Would you know how does the
pea-sant, Would you know how does the pea-sant sow his bar - ley and

THE PEASANT'S HOLIDAY.


wheat. Look, 'tis so so does the pea-sant, Look, 'tis so so does the
peasant, Look, 'tis so so does the peasant Sow his bar-ley and wheat.
La la la la la la la la la la la la la la
la la la la la la la la la la la la la la la la la.

2

Would you know how does the peasant,
Reap his barley and wheat.
Look 'tis so, so, does the peasant,
Reap his barley and wheat.
La la, la la, la la, &c.

3

Would you know how does the peasant,
Thrash his barley and wheat.
Look, 'tis so, so, does the peasant,
Thrash his barley and wheat.
La la, la la, la la, &c.

4

Would you know how does the peasant,
Sift his barley and wheat.
Look, 'tis so, so, does the peasant,
Sift his barley and wheat.
La la, la la, la la, &c.

5

Would you know how rests the peasant,
When his labour is done.
Look, 'tis so, so, rests the peasant,
When his labour is done.
La la, la la, la la, &c.

6

Would you know how plays the peasant,
When his labour is done.
Look, 'tis so, so, plays the peasant,
When his labour is done.
La la, la la, la la, &c.

The children form a circle; each standing in position 2, Plate LXVII., and singing. When they arrive at the words, "'Tis so, so, does the peasant," they take up their little aprons and imitate the sower casting seed into the ground. When they reach, "La, la," they instantly join hands and move round in a circle, according to the tune.

When they have sung the first verse, they resume their first position, sing the second verse, and imitate the reaper when cutting the corn. The same again, and imitate the thrasher when thrashing the corn. The same again, and imitate the peasant when sewing the corn. When they arrive at, "Look, 'tis so, so, rests the peasant," in the fifth verse, each child falls on the left knee, rests his right elbow on the other knee, and leans his head on his right hand, in imitation of the peasant resting. Conclude the verse as before.

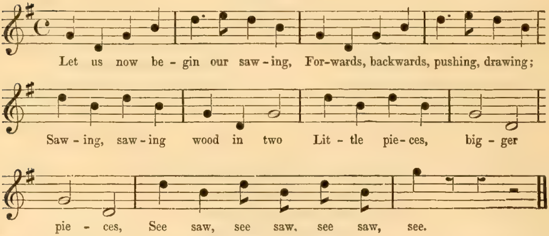
When they begin to sing the sixth verse, they instantly form themselves into two equal parallel lines, facing each other. When they sing, "'Tis so, so, plays the peasant," each springs up on his toes, as he sings "so, so." The second time he sings "so, so," each springs up, and, at the same time, turns to the right, half-way round, so that they are all back to back. When they sing the same the third time, each springs round to the right, so that they stand all face to face again, and makes a bow to the opposite playfellow, as the line closes.

When they begin to sing "La, la, la," each takes hold of his opposite neighbour's hand and they all gallop round the room.

In this game the whole muscular system is exercised. It is not well to play this after the children have had many other exercises, there being no game that requires so much energy, both mental and physical. See the Frontispiece.

XVIII.

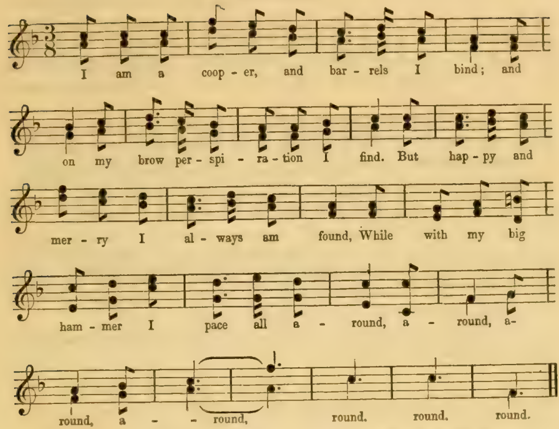
THE SAWYER.


Let us now be - gin our saw - ing, For-wards, backwards, pushing, drawing;
Saw - ing, saw - ing wood in two Lit - tle pie - ces, big - ger
pie - ces, See saw, see saw, see saw, see.

The children form two columns, facing each other. Each couple join hands, and as they sing move their arms forwards and backwards, in imitation of the sawyer cutting wood. When singing, "Little pieces," they make short movements; when singing, "Bigger pieces," they make more extended movements, according to the tune. When they sing "See saw, see saw," they move quickly; and with the last word, "see," they suddenly stop and raise their arms.

XIX.

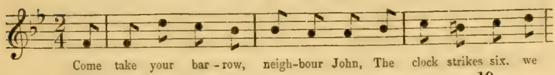
THE COOPER.

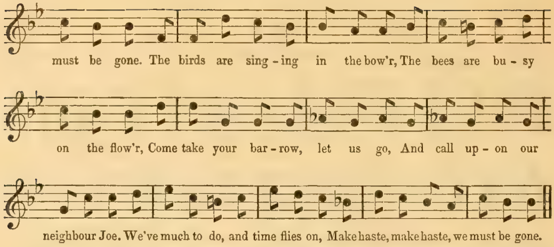

I am a coop - er, and bar - rels I bind; and
on my brow per - spi - ra - tion I find. But hap - py and
mer - ry I al - ways am found, While with my big
ham - mer I pace all a - round, a - round, a-
round, a - - round, round. round. round.

A group of six or eight children form a circle, having their hands round each other's necks, to represent the tub, or barrel. Two or three stand outside, to represent coopers. The coopers begin the song, and, walking round the tub, keep time with their hands and feet. With their fists they imitate the cooper's motions with the hammer They take three steps, then stop, and strike three times: the steps and strokes corresponding to the tune. When they sing "Round, round," the tub moves round, and all join in chorus; the coopers hammering at the tub as it moves round.

XX.

THE WHEELBARROW.


Come take your bar - row, neigh-bour John, The clock strikes six. we


must be gone. The birds are sing - ing in the bow'r, The bees are bu - sy
on the flow'r, Come take your bar - row, let us go, And call up - on our
neighbour Joe. We've much to do, and time flies on, Make haste, make haste, we must be gone.

The children stand in a single line, in marching order. When the song begins, the first child stoops, placing his hands behind him, to represent a wheelbarrow. The second child takes hold of his hands, and they both march round in a circle, imitating a man with a wheelbarrow. The circle is completed by the time the song is finished. As the song begins again the second couple follows the first, and two men with barrows are marching: they are followed by a third, when the circle is completed; and so on, until the whole are marching in a circle with their barrows.

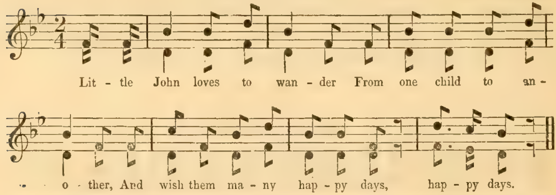
This play is specially intended to exercise the muscles of the trunk particularly those employed in the act of stooping.

GAMES OF HARMONY.

THESE games have a tendency to promote love to each other.

XXI.

THE CHILD'S GREETING.


Lit - tle John loves to wan - der From one child to an -
- o - ther, And wish them ma - ny hap - py days, hap - py days.

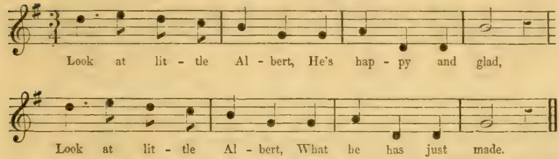
The children form a circle, and sing the song. When the song commences, one little child leaves the circle and wanders round, greeting as he wanders. He moves at such a speed as to be able to reach his place when the tune ends.

The tune is repeated until each child has wandered round, his name being sung at the time by all the others.

This is intended to promote gracefulness of manner, and courteous behaviour. If a child be timid, he can be accompanied by another. Care must be taken that all names be distinctly pronounced.

XXII.

THE LITTLE MASTER OF GYMNASTICS.


Look at lit - tle Al - bert, He's hap - py and glad,
Look at lit - tle Al - bert, What he has just made.

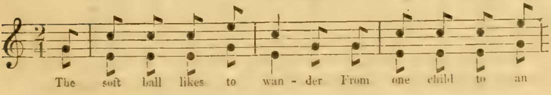
In this game all the positions in Plate LXVII., can be introduced, and every variety of exercise can be enjoyed, according to the dictation and example of the teacher, or to the peculiar taste of the children.

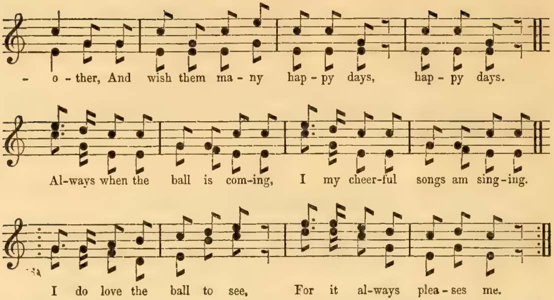
A circle of children is formed, who sing the song. One child stands in the centre, and takes any position, or makes any movement required, as the song closes. At the end of the song, all the rest imitate the one in the centre. The centre one joins the circle; the next in order forms the centre; the song is repeated with the new name, and the same course is adopted.

Should any of the children not be able to invent or to remember a position or a movement, the teacher can easily suggest by word or action. Care is required in this game, to prevent too violent exercises, the children being guided, in a great measure, by their own fancies, and the strong not being able to judge of the requirements of the weak.

XXIII.

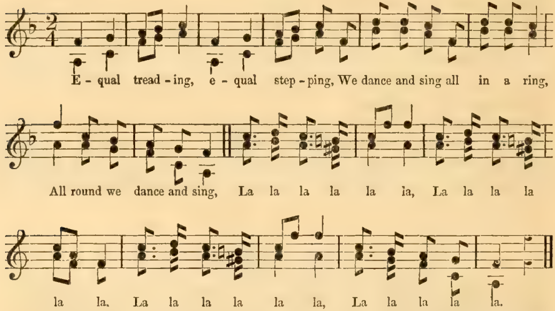
THE WANDERING BALL.




- o - ther, And wish them ma - ny hap - py days, hap - py days.
Al-ways when the ball is com-ing, I my cheer-ful songs am sing-ing.
I do love the ball to see, For it al-ways plea - ses me.

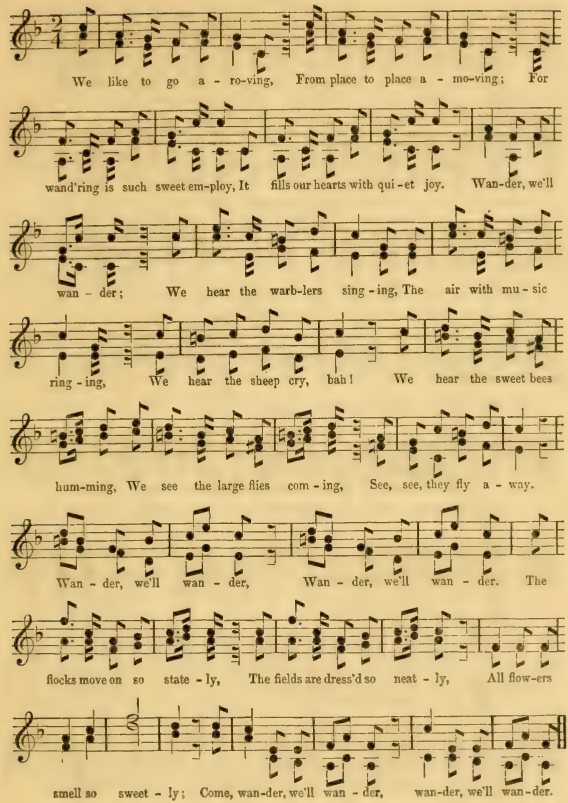
Each child takes a ball in the right hand, and, when the song commences, first passes it to the left hand; secondly, to his left hand neighbour, receiving another ball in the right hand from his right hand neighbour; at the same time, each motion, and change, must be in strict accordance with time, or the harmony will be destroyed.

XXIV.


E - qual tread - ing, e - qual step - ping, We dance and sing all in a ring,
All round we dance and sing, La la la la la la, La la la la
la la. La la la la la la, La la la la la.

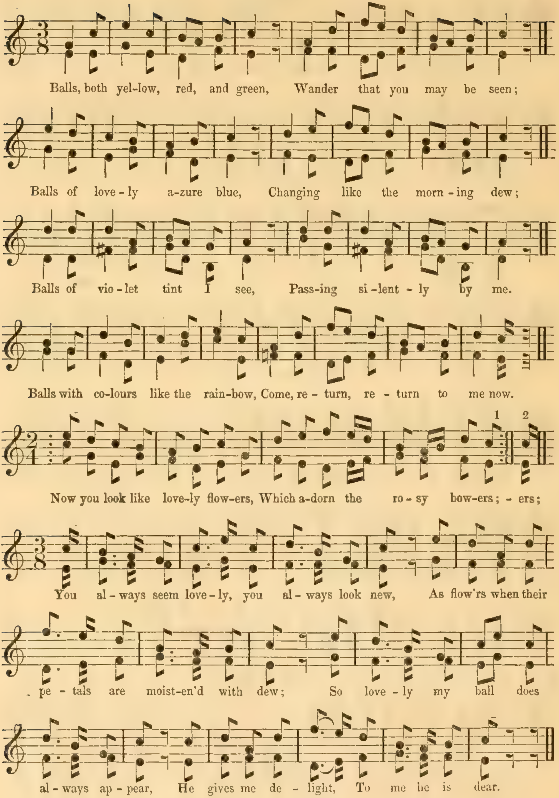
Children form a circle and move from right to left, or left to right, keeping time with their feet. First the movement is slow, afterwards quick, as the words indicate.

XXV.


We like to go a - ro-ving, From place to place a - mo-ving; For
wand'ring is such sweet em-ploy, It fills our hearts with qui - et joy. Wan-der, we'll
wan - der; We hear the warb-lers sing - ing, The air with mu - sic
ring - ing, We hear the sheep cry, bah! We hear the sweet bees
hum-ming, We see the large flies com - ing, See, see, they fly a - way.
Wan - der, we'll wan - der, Wan - der, we'll wan - der. The
flocks move on so state - ly, The fields are dress'd so neat - ly, All flow-ers
smell so sweet - ly; Come, wan-der, we'll wan - der, wan-der, we'll wan-der.

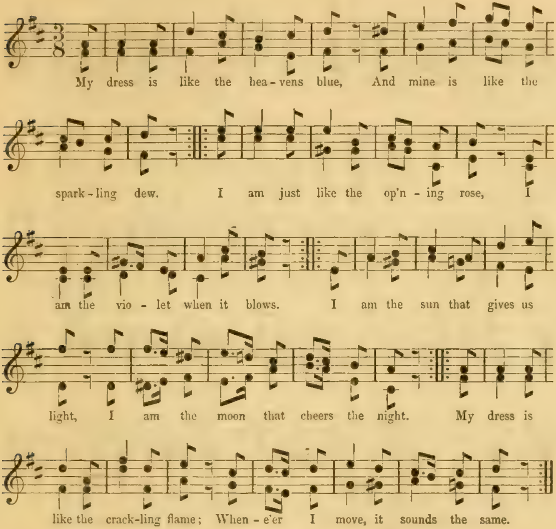
The children promenade with perfect freedom, keeping time, and singing the song.

XXVI.


Balls, both yel-low, red, and green, Wander that you may be seen;
Balls of love-ly a-zure blue, Changing like the morn-ing dew;
Balls of vio-let tint I see, Pass-ing si-lent-ly by me.
Balls with co-lours like the rain-bow, Come, re-turn, re-turn to me now.
1 2
Now you look like love-ly flow-ers, Which a-dorn the ro-sy bow-ers; -ers;
You al-ways seem love-ly, you al-ways look new, As flow'rs when their
pe-tals are moist-en'd with dew; So love-ly my ball does
al-ways ap-pear, He gives me de-light, To me he is dear.

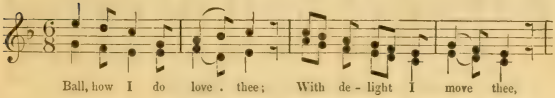
This song is sung when the children build pyramids, &c., with coloured balls, and roll them on the table or ground.

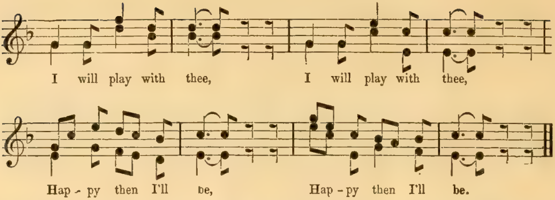
XXVII.


My dress is like the hea - vens blue, And mine is like the
spark - ling dew. I am just like the op'n - ing rose, I
am the vio - let when it blows. I am the sun that gives us
light, I am the moon that cheers the night. My dress is
like the crack-ling flame; When - e'er I move, it sounds the same.

This song is sung when the balls are rolled to and fro upon the table.

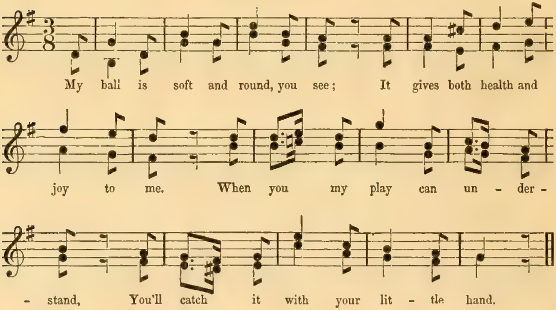
XXVIII.




I will play with thee, I will play with thee,
Hap - py then I'll be, Hap - py then I'll be.

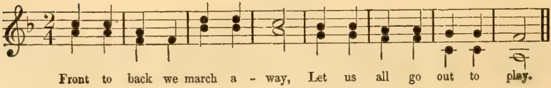
This is sung when the ball is thrown against the wall and caught as it rebounds.

XXIX.


My ball is soft and round, you see; It gives both health and
joy to me. When you my play can un - der -
- stand, You'll catch it with your lit - tle hand.

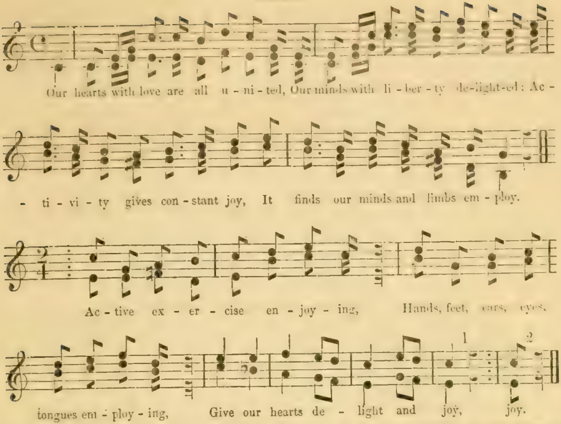
The same as No. XXVIII.

XXX.



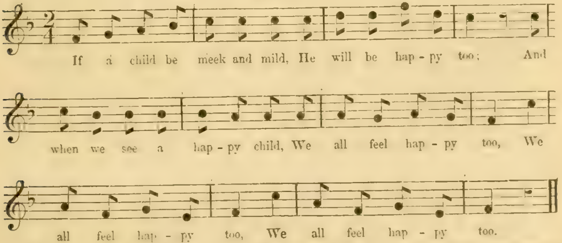
This is sung when the children march into the playground.

XXXI.


Our hearts with love are all u - ni - ted, Our minds with li - ber - ty de-light-ed; Ac -
- ti - vi - ty gives con - stant joy, It finds our minds and limbs em - ploy.
Ac - tive ex - er - cise en - joy - ing, Hands, feet, ears, eyes,
tongues em - ploy - ing, Give our hearts de - light and joy, joy.
1
2

This song is sung when promiscuous exercises are given, according to the fancy of the teacher.

XXXII.


If a child be meek and mild, He will be hap - py too; And
when we see a hap - py child, We all feel hap - py too, We
all feel hap - py too, We all feel hap - py too.

This song is sung when a change is required during the industrial exercises, or games with cubes, sticks, paper, &c.

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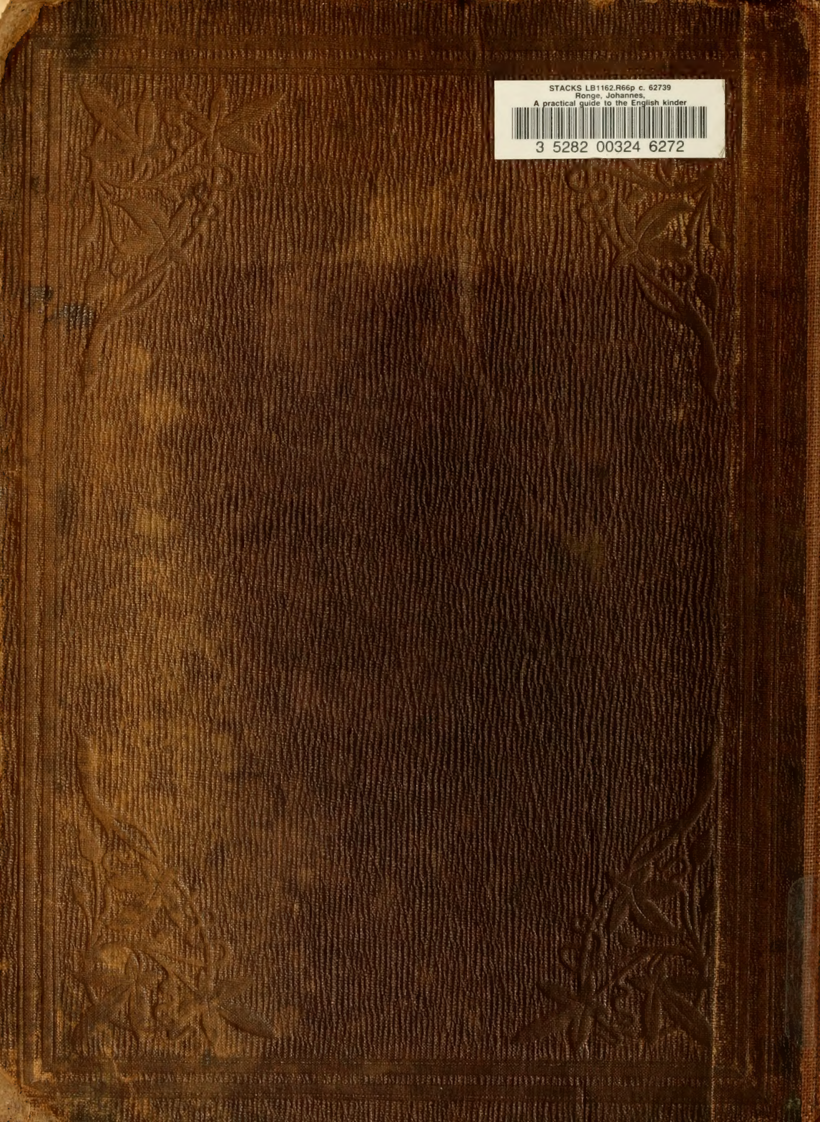

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